

DVD SPECIAL: GUIDE TO THE COOLEST PLAYERS

SOUND & VISION

HOME THEATER • AUDIO • VIDEO

MULTIMEDIA • MOVIES • MUSIC

SNOW WHITE LIVES!

Inside Disney's Deluxe DVD

DVD Confidential

40 Discs Reveal Hollywood's Lurid Past

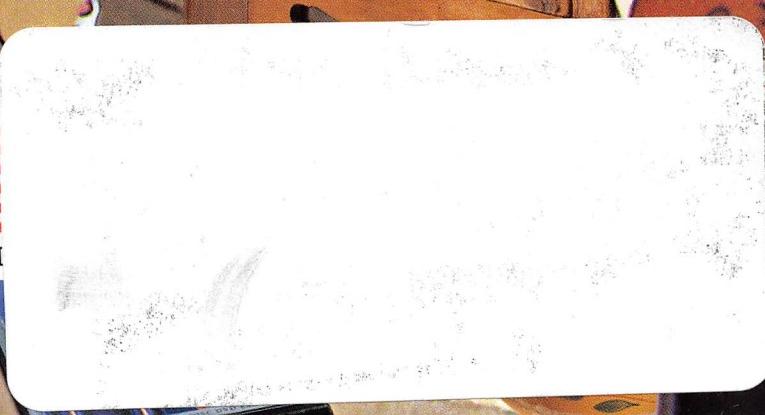
High-End Home Theater

4 Premium Preamps

Reviewed

- RCA & Integra DVD Players
- Mitsubishi HDTV
- Marantz Receiver And More!

www.soundandvisionmag.com



EMBER 2001

99

DA \$4.99

95

CINEMATM SERIES

Box Office GIANTS!



... very smooth ... excellent clarity and detail ... excellent tightness and control ... for both music and movies.

- Doug Schneider, SoundStage!

I was amazed ... big, open sound ... great definition ... perfectly integrated ... if you want a ... home theater speaker system that'll also do justice to your music collection, it'll be hard to beat Paradigm's Cinema™ system.

- Joe Hageman, Sound & Vision

In the US, contact AudioStream, MPO Box 2410, Niagara Falls, NY 14302 T • (905) 632-0180
In Canada, contact Paradigm, 205 Annagem Blvd., Mississauga, ON L5T 2V1 T • (905) 564-1994
Copyright ©2001 Paradigm Electronics Inc. and Bavan Corp.

www.paradigm.com

Paradigm®

THE ULTIMATE IN SOUND FOR MUSIC AND HOME THEATER™



...easily the best-sounding speakers we've heard, and their clarity
and range were awesome ...

- William O'Neal, Computer Gaming World



Sound & Vision
Reviewer's Choice Awards
Paradigm® Cinema™ Series
Home Theater Speaker System



POWER AND PERFORMANCE IN PERFECT HARMONY.



DVD-2800

Leading edge Progressive Scan DVD player

- Incorporates PureProgressive™ Scan Technology
- Superior 3:2 Pulldown Detection and de-interlacing
- 12-bit, 54-MHz Analog Devices Video D/A Conversion



DVM-4800

Audiophile grade 5-Disc DVD Audio/Video Changer

- New AL24 Plus Processing and HDCD for the ultimate in DVD-Audio sound
- True Progressive Scan with 3:2 Pulldown Detection and de-interlacing
- Incorporates Subwoofer Bass Management for DVD-Audio

Visit your authorized Denon dealer to experience the entire Denon product line for yourself.
Download DVD-2800, DVM-4800, or AVR-4802 product information (including the owner's manual) at www.denon.com



AVR-4802

THX Ultra-Certified 7.1 Channel A/V Digital Surround Receiver

- World's first A/V component to incorporate THX post-processing for DTS ES 6.1 bitstream-encoded material and Dolby Pro Logic II
- World's first to offer DTS 96/24 5.1 decoding for DVD-Video
- DDSC-Digital circuitry featuring dual Analog Devices SHARC DSP Processors

Denon. Bringing superior audio and audio-visual performance together for the perfect digital home theater experience – movies and music have never been so superb. It's an achievement that's been in the making for over 90 years, since the company first manufactured single-side discs and gramophones. From their long heritage of reproducing sound with passion and artistry comes their digital discoveries of today, as exemplified in these three exciting new products. Design integrity, innovation, and performance come together as one. Sound and vision strike a perfect balance.

DENON
the first name in digital audio

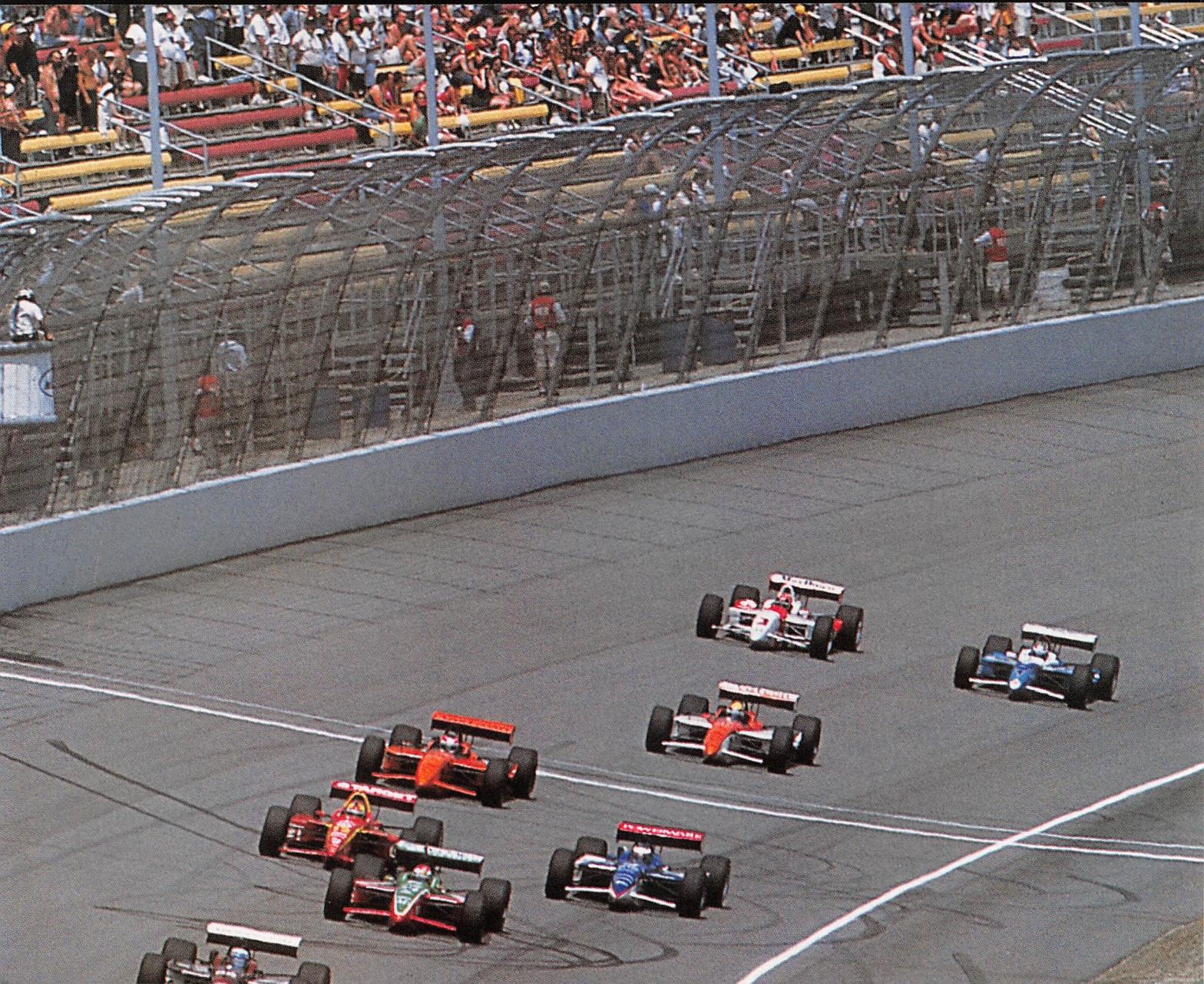
DENON ELECTRONICS • 19 CHAPIN ROAD, PINE BROOK, NJ 07058-9777
973-396-0810 • www.denon.com

DENON CANADA • 17 DENISON STREET, MARKHAM, ONTARIO, CANADA L3R-1B5
905-475-4085 • www.denon.ca

DVD DV



Watch the start while



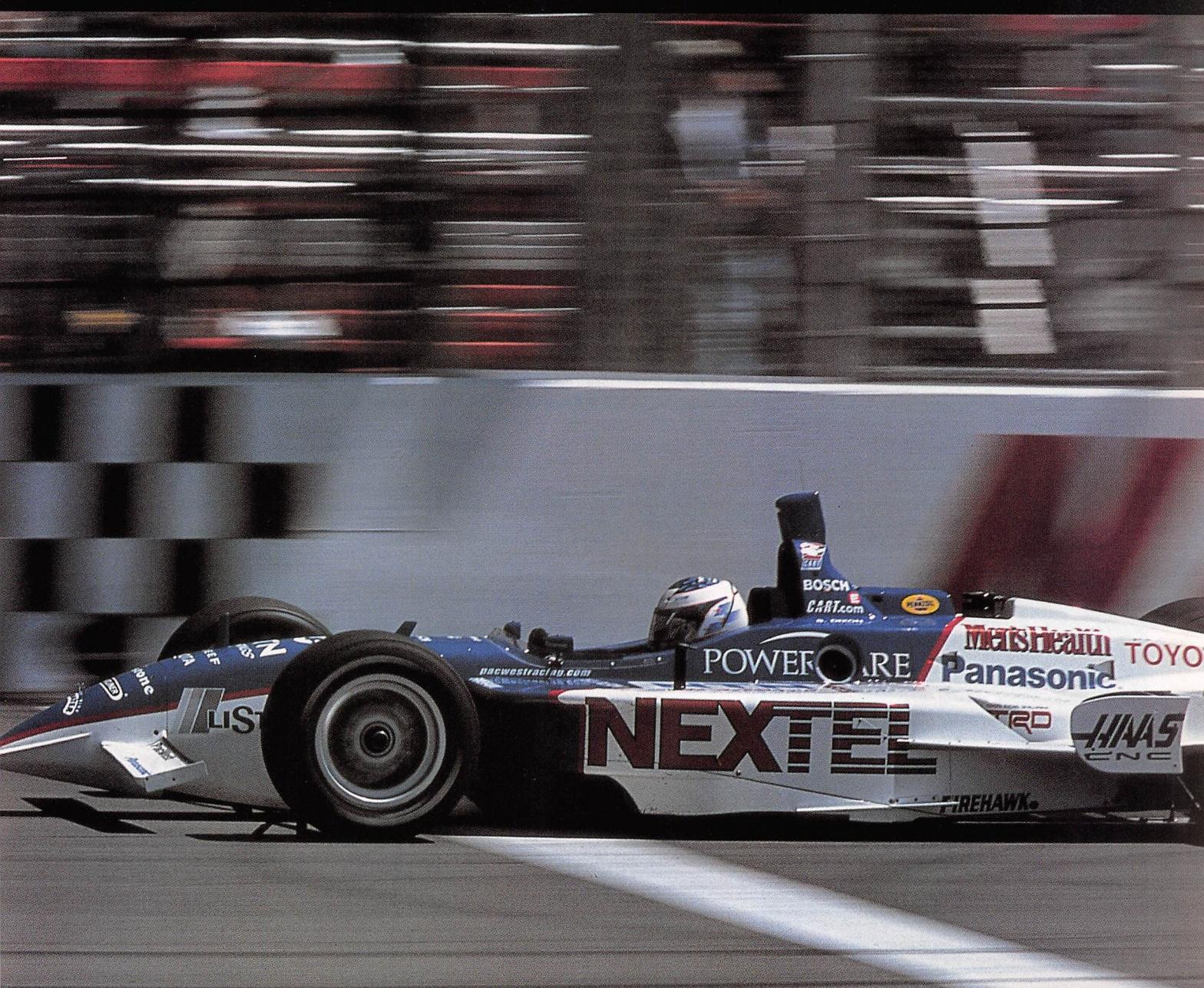
DVD DVD DVD DVD DVD DVD DVD DVD DVD DVD

Panasonic introduces DVD Time Slip. Our newest DVD video recorder has a unique Time Slip function that actually lets you watch the recorded portion of an ongoing show from the beginning - while continuing to record the same show still in progress. First we made DVD possible. Then portable. Now it gets really amazing. Time Slip record/playback / simultaneous record and playback / DVD-RAM and DVD-R compatibility
Want more? Click on www.panasonic.com/dvd



recording the finish.

Panasonic



Titanium, TriVector, Terrific!

From their titanium drivers to the unique, TriVector™ design of their surround speakers, our "T" series will thrill you. Come see these tantalizing systems at your local Atlantic Technology dealer today. One of them is bound to fit you to a "tee."



System T90 pictured

Atlantic Technology.
INNOVATIVE HOME THEATER

343 Vanderbilt Avenue Norwood MA 02062
(781)762-6300 www.atlantictechnology.com

SOUND & VISION

HOME THEATER • AUDIO • VIDEO • MULTIMEDIA • MOVIES • MUSIC

Editor in Chief BOB ANKOSKO

Art Director LAURA SUTCLIFFE

Executive Editor BRIAN C. FENTON

Managing Editor DAVID STEIN

Features Editor MICHAEL GAUGHN

Technical Editor DAVID RANADA

Technology Editor MICHAEL ANTONOFF

Senior Reviews Editor AL GRIFFIN

Entertainment Editor KEN RICHARDSON

Movie Reviews Editor JOSEF KREBS

Assistant Managing Editor PETER PACHAL

Associate Art Director MARIA RAMOS

Database Manager SANTIAGO PIZZINI

Editorial Coordinator JAE SEGARRA

Contributing Technical Editors DANIEL KUMIN, IAN G. MASTERS,
TOM NOUSAINE, KEN C. POHLMANN

Editor at Large JULIAN HIRSCH

Senior Contributors William Livingstone, Michael Riggs, Robert Rippa

Contributors Billy Altman, Rad Bennett, Gordon Brockhouse, Francis Davis, Rebecca Day, Laura Evenson, Will Friedwald, Bryan Harrell (Tokyo), Marc Horowitz, Ken Korman, Mike Mettler, Brett Milano, Andrew Nash, Mel Neuhaus, Parke Puterbaugh, Teri Scaduto, Sol Louis Siegel, Steve Simels, Jamie Sorcher, Rich Warren, Richard C. Walls

Editorial offices: 1633 Broadway, New York, NY 10019; 212-767-6000;
e-mail, soundandvision@hfmag.com

Vice President, Group Publisher
TONY CATALANO

National Advertising Director Angela Stolfi, 212-767-6032

Regional VP/Ad Director, West Coast Bob Meth, 323-954-4831

Regional Account Managers Gabrielle DiFolco, 212-767-6063;
Brian Masamoto, 323-954-4857; Paul Smith, 212-767-6077

Director of Marketing Rob Sabin, 212-767-6027

Promotions Manager Anika A. Williams, 212-767-6758

Assistant to the Publisher Breana Murphy **Sales Assistant** Auxy Herrera

Operations Manager/Ad Coordinator Linda Neuweiler **Classified Advertising Sales** 800-445-6066

Production Director Michael Esposito

Production Manager Lorraine Conaty **Production Assistant** Maria Fernandez

VP, Group General Manager Winsford Belle

General Manager Frank Truskolaski **Business Manager** Anthony Celebrano

Senior Director, Subscription Promotion Mira Soto **Newsstand Sales Director** Megan Jenkins

Senior Director, Circulation Services Rocco P. Chiappetta

HACHETTE INTERNATIONAL

VP, Global Advertising, Aude de Rose, 212-767-6369

HFM
Hachette
Filipacchi
Magazines

Sound & Vision is published by Hachette Filipacchi Magazines, Inc.

Corporate offices: 1633 Broadway, New York, NY 10019; 212-767-6000

Chairman: Daniel Filipacchi • **President and CEO:** Jack Kliger

Senior Executive VP and Editorial Director: Jean-Louis Génibre

Executive Vice President and COO: John Fennell

Senior VP, CFO, and Treasurer: John T. O'Connor

Senior VP, Director, Group Publishing/Corporate Sales: Nicholas J. Matarazzo

Senior VP, Group Publishing Directors: John J. Miller, Carl Portale

Senior VP, General Counsel: Catherine R. Flickinger

Senior VP, Manufacturing and Distribution: Anthony R. Romano

Senior VP, Brand Development: David J. Fishman

VP, Circulation: David W. Leckey • **VP, Corporate Communications:** Anne Lattimore Janas

VP, Corporate Marketing: Barbara Hertz Friedman

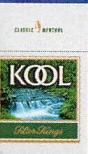
VP, Human Resources: Michele Daly • **VP, Chief Information Officer:** John Bobay

Associate Editorial Director: Peter Herbst



MPA

COPYRIGHT © 2001 BY HACHETTE FILIPACCHI MAGAZINES, INC. All rights reserved. **Sound & Vision**, November 2001. Volume 66, Number 9. **SUBSCRIPTION SERVICE:** One-year subscription rate for the U.S. and its possessions, \$24; Canada, \$34 (includes 7% GST); Canadian Business No. 126018209RT, IPC Sales Agreement No. 99236; all other countries, \$34; cash orders only, payable in U.S. currency. Send change-of-address forms and all subscription correspondence to **Sound & Vision**, P.O. Box 55627, Boulder, CO 80322-5627; or e-mail to hachette@neodata.com (indicate that it concerns **Sound & Vision**). Allow at least eight weeks for change of address to become effective. Include both old and new address, enclosing, if possible, an address label from a recent issue. If you have a subscription problem, write or e-mail to the above address or call 850-682-7654; fax 850-683-4094. **PERMISSIONS:** Material in this publication may not be reproduced in any form without permission. Send requests for permission to: The Editor, Sound & Vision, 1633 Broadway, New York, NY 10019. **BACK ISSUES** of **Sound & Vision** are available. Write to ISI/Sound & Vision, P.O. Box 454, East Rutherford, NJ 07073. For each copy, enclose a check or money order for \$7.95 in U.S. funds (\$9.25 for orders sent to Canada, \$14.25 for other foreign locations); add \$1 to those prices for each copy of the **Sound & Vision Buyer's Guide 2001** annual. For telephone credit-card orders, call 800-544-6748 or 201-559-0091. **EDITORIAL CONTRIBUTIONS** must be accompanied by return postage and will be handled with reasonable care, but the publisher assumes no responsibility for the return or safety of unsolicited manuscripts, art, or photographs. **PRIVACY:** Occasionally we share information with other reputable companies whose products and services might interest you. If you prefer not to participate, call the following number and indicate that to the operator: 303-604-1464.



THE HOUSE OF MENTHOL™



BIG MENTHOL

©2001 B&W T Co.

Box Kings, 16 mg. "tar", 1.2 mg. nicotine av. per cigarette by FTC method. Actual deliveries will vary based on how you hold and smoke your cigarette. For more product information, visit our website at www.brownandwilliamson.com

SURGEON GENERAL'S WARNING: Smoking Causes Lung Cancer, Heart Disease, Emphysema, And May Complicate Pregnancy.

LEGENDARY BEGINNINGS

Nina Storey's influences are unmistakable, but the passion this emerging singer-songwriter displays on her self-titled CD proves she's a true original. Klipsch celebrates the spirit of new beginnings with eight newly released Reference Series loudspeakers — all designed with Tractrix® Horn-loaded technology to deliver the power of Nina's deepest blues, brightest funk and heartfelt soul, along with the clarity to reveal the wry smile punctuating her lyrical wit. Experience every line with all the emotion Nina intended by visiting your local Klipsch dealer or www.klipsch.com.

A **LEGEND** IN SOUND



©2001 Klipsch Audio Technologies. RB-3 loudspeakers shown in blond maple finish.

Klipsch



track one

The View from Berlin

The German press release hailed the Internationale Funkausstellung 2001 trade fair as "No. 1 in the world for consumer electronics." As the bus pulled up to the convention complex next to the Funkturm (radio tower) on the western edge of Berlin, I was immediately struck by how big it was — more than two dozen buildings surrounding the big "Sommergarten" amphitheater. It was the last week of August, and I was one of 370,000 visitors to IFA 2001, two-thirds of them everyday folks who paid \$12 a pop to experience the latest electronic marvels.

My first stop was the Philips "stand," which was actually a gigantic building. Stepping into the cavernous space, bathed in blue light and buzzing with white-clad booth attendants, I felt like I was walking onto the set of *Star Trek: Enterprise* (see photo). In the middle of the exhibition area was a towering shrine to perhaps the hottest home-entertainment product here and in Europe — the DVD recorder. Philips was trumpeting the arrival of the world's

In Berlin, Universal

Music Group surprised many by announcing that it had decided to support SACD as a "preferred format."



first DVD+RW recorder, the \$2,000 DVDR 1000, slated to reach these shores in October. Among its features are four recording-quality modes, giving you from 1 to 4 hours of disc capacity, and a Favorite Scene linear editing system with more than 200 markers. Watch for our review in a future issue.

Philips also joined forces with Sony to promote Super Audio CD (SACD), which seemed to be generating more buzz at IFA than in the States. At a press conference, officials announced that more than 20 players are now available from 10 manufacturers and put the number of SACD releases at 450, including 50 multichannel titles (that total seems generous based on what's readily available in the U.S.). Universal Music Group also announced that it would support SACD as a "preferred format," a move that surprised many because the company had participated in numerous DVD-Audio demos (see "SACD Gains Support," page 19).

At the Austin Powers-inspired Sony pavilion (see photo), the big news was the new MicroMV digital video format, which uses a 60-minute cassette that's about the size of an audio microcassette. I was impressed at how compact one of the two new MicroMV camcorders was, but I found it a little awkward to handle. The calling card of the second model was its Bluetooth capability, which enables wireless data transfer with a range of about 30 feet. Expect to see MicroMV camcorders here in the near future.

Among the other interesting products that caught my eye, many of which will make their way to stores in America, were JVC's combination 40-gigabyte (GB) hard-disk drive/S-VHS ET recorder and widescreen 28- and 32-inch TVs with built-in 20-GB hard-disk recorders; Pioneer's DVD-R/RW-format DVR-7000 DVD re-

corder (\$2,800) and Pro-1000HD 50-inch flat-panel plasma TV (\$17,500); and from Thomson (RCA), a Personal Jukebox/MP3 player with a 10-GB hard-disk drive (about \$300) plus a \$30,000 61-inch plasma display. In addition to a nifty digital camcorder with a removable still camera, Panasonic showed a 256-megabyte

SD memory card that can store up to 12 hours of music as well as a variety of SD-compatible devices, including a notebook computer, a camcorder, a camera, and both headphone and



wristwatch audio players priced around \$500.

ON A PERSONAL NOTE, I started work on this column just before learning about the most heinous acts of terrorism in our history. (Everything else in the issue had already been shipped to the printer, so if any content seems inappropriate, please understand that it was too late to change it.) My colleagues and I watched helplessly from our 45th-floor offices in midtown as smoke from the disaster at the World Trade Center consumed the whole of lower Manhattan. I was reminded of the dark past of Berlin, the city I had just visited. I'm stunned. Sick to my stomach. Angry. I mourn for the thousands of innocent people who lost their lives. We will rebuild, but the world will never be the same.

Bob Ankosko, Editor in Chief

The following Hachette Filipacchi magazines had already gone to press and were unable to include recognition of the tragic events on September 11 in their editors' letters: *Car and Driver*, *Car Stereo Review's Mobile Entertainment*, *Cycle World*, *Elle Décor*, *Metropolitan Home*, *Popular Photography*, *Road & Track*, and *Showboats International*. Their editors regret they were unable to express the grief and sympathy for the survivors that we all share.



TX-DS595
model

OBSE

INTRODUCING THE TX-DS595: THE DIGITAL SURROUND HOME THEATER RECEIVER BUILT BY AUDIOPHILES FOR AUDIOPHILES.

At Onkyo, we're as obsessed with audio excellence as you are. And there is no better example of our obsession than our new TX-DS595 Digital Surround Home Theater Receiver.

Begin with the DS595's Wide Range Amplifier Technology (WRAT). Exclusive to Onkyo, it gives music and movie lovers a superior sonic entertainment experience from any audio source including DVD-Audio and Super Audio CD.

The DS595 also features 96kHz/24 bit D/A and A/D converters, oversize filter capacitors and a massive isolated transformer for ultra-clean, ultra-accurate sound reproduction. The Optimum Gain Volume circuit virtually eliminates noise contamination even at low listening levels.

Beyond its musical soul, the DS595 has something of a brain. Its exclusive A-Form (Auto-Format) senses the

signal format – DTS, Dolby Digital, or stereo and conveniently switches to the listening modes pre-assigned for that source. And there's Onkyo's exclusive powerful Pre-Programmed/Learning Multi-Brand Remote with Macros.

Not only are we obsessed with pleasing the ear, but the eye as well, as evidenced in its flawlessly finished brushed aluminum front panel.

There's one more thing we're obsessed about. Value. You won't find this kind of advanced technology, this much performance and this much convenience at this price level anywhere else.

So let our obsession for audio performance fulfill yours. The new TX-DS595 Digital Surround Home Theater Receiver. Only from Onkyo.



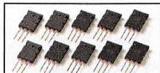
ONKYO
IMAGINATIVE SIGHT & SOUND

www.onkyousa.com

SSED



- A massive shielded power transformer and oversized, low ESR filter capacitors meet the demands of today's low-impedance speakers.
- Individually matched discrete output transistors eliminate sonic differences between channels and guarantee accurate, precise, natural sound imaging. High quality extruded aluminum heat sinks keep everything cool.



- Four easily assignable digital inputs (two coaxial and two optical) deliver maximum flexibility and convenience.
- The TX-DS595 remote features direct access buttons to individual inputs, learning capability and remote interactive (RI) capability to operate major functions of other Onkyo components. Macros allow programming up to sixteen button operations into a single button.



HOLLYWOOD SPENDS BILLIONS OF DOLLARS ON VISUAL EFFECTS.

SHOW A LITTLE APPRECIATION.



Travel back to a place where dinosaurs roam the earth. Your living room. The SharpVision XV-Z9000U delivers a viewing experience so realistic it leaps over the traditional boundaries of home theater. Why? Because the Z9000 is the world's first 16:9 single-chip, HD front projector based on DLP technology. That means going beyond conventional home theater. It means that now, all of your favorite films, sports and documentaries will burst into life with unparalleled contrast and brightness. Paired with an HD decoder, it will draw you into a world of startling high definition. It's the kind of innovation that you'd expect from a longtime leader of front-projection technology.

So, immerse yourself in a completely new level of home theater. Hollywood deserves it. And so do you.

SHARPVISION®

©2001 Sharp Electronics Corporation

DLP
A TEXAS INSTRUMENTS TECHNOLOGY

SHARP
www.sharp-usa.com
1-877-388-SHARP

NOVEMBER 2001

SOUND & VISION

WHERE TECHNOLOGY BECOMES ENTERTAINMENT™

FEATURES

90 DVD's Most Wanted

Start hunting — for DVD players with today's most in-demand features.

BY KEN C. POHLMANN

98 Snow White Lives!

An exclusive behind-the-scenes look at how Disney Studios turned the classic film into a deluxe DVD. BY LAURA EVENSON

104 As Good as Gold

High-end preamp/processors from B&K, Lexicon, and Meridian set a new standard for surround sound. BY DANIEL KUMIN

113 Choosing a Custom Installer

A step-by-step guide to finding the right man for the job. Hint: he's not your uncle.

BY JOHN SCIACCA

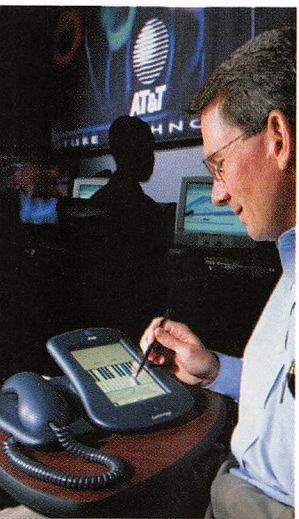
116 Tech Tour: Visiting Video Valley

Divining the future of home entertainment in New Jersey — yes, New Jersey.

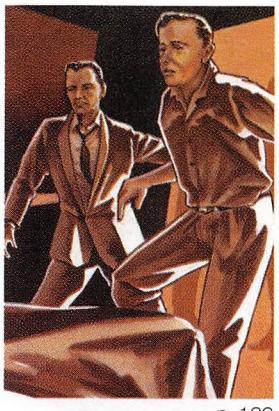
BY MICHAEL ANTONOFF

120 DVD Confidential

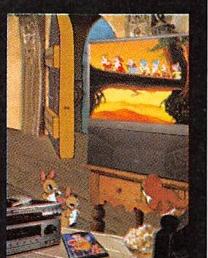
Our guide to 40 sin-tillating discs that reveal the skeletons lurking in Hollywood's lurid closet. BY MATT ZOLLER SEITZ



p. 116



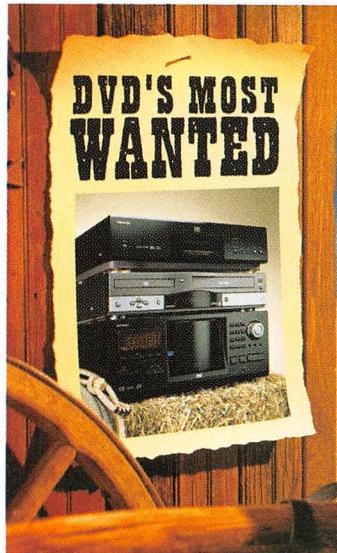
p. 120



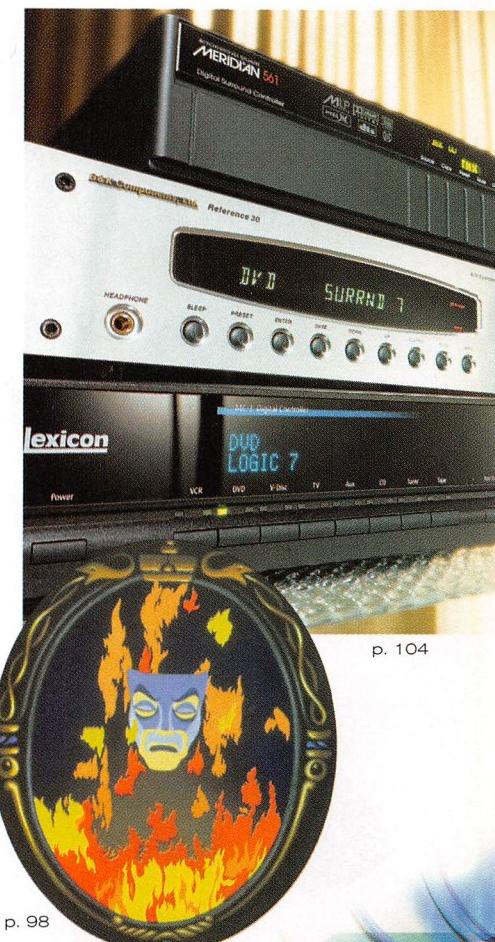
On the cover

Mitsubishi 46-inch HDTV monitor (p. 49), Integra DPS-7.2 DVD-Audio/Video player (p. 61), Marantz SR7200 digital surround receiver (p. 54).

Snow White images courtesy of the Walt Disney Company; photo illustration by Tony Cordero.



p. 90



p. 104

p. 98



WIRES

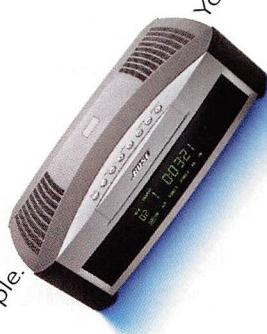


SPEAKERS



EASY SYSTEM

You see two speakers and a media center with DVD/CD. Simple.



You hear Bose sound from the left, right, center and sides. Nice.



NEW FROM BOSE®

**Introducing the 3·2·1
home entertainment system.
Surround sound
without room invasion.**

Imagine five-speaker surround sound. Now imagine enjoying much of that same experience without center or rear speakers. And without all those extra wires.

Imagine that.



For a free information kit, dealers and Bose stores near you, call 1-888-321-BOSE. Ask for Ext. E26

Learn more at 321.bose.com and enter e-code: E26

Hideaway Acoustimass® module not shown.
©2001 Bose Corporation JN10986

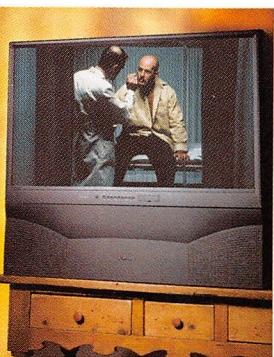
BOSE®
Better sound through research®

SOUND & VISION

TEST REPORTS



p. 73



p. 49



p. 129



p. 31



p. 78

- 49 Mitsubishi Exclusive!** 46-inch rear-projection HDTV monitor
- 54 Marantz Exclusive!** SR7200 6.1-channel digital surround receiver
- 61 Integra Exclusive!** DPS-7.2 DVD-Audio/Video player
- 64 EchoStar** DishPVR 501 satellite receiver/recorder
- 68 RCA** RC5240P DVD-Video player
- 73 Wharfedale Exclusive!** Pacific Series home theater speaker system
- 78 Yamaha Exclusive!** CDR-HD1000 CD/hard-disk recorder
- 85 Outlaw Audio Exclusive!** The first outboard bass manager



p. 54



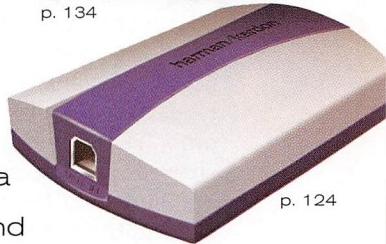
p. 68

DEPARTMENTS & COLUMNS

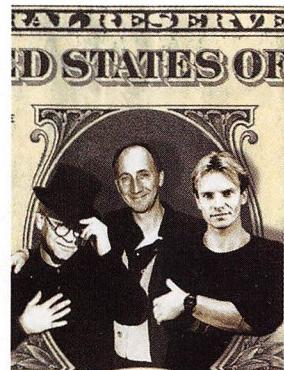
- 9 Track One** Bob Ankosko / A note from the editor
- 16 Random Play** Copy-proof CDs, HDTV to the extreme, 15 minutes with animation ace Andy Jones, more
- 22 Feedback** Readers sound off
- 30 New Products** The latest home-entertainment gear
- 38 Q&A** Ian G. Masters / Ask the expert
- 42 Home Theater** David Ranada / Black is the color . . .
- 45 Digital Horizons** Ken C. Pohlmann / My moral dilemma
- 124 Multimedia Maven** Michael Antonoff / Bridging MP3 and PCM, Intel voice disguiser, Britney all around, more
- 126 Road Gear** Mike Mettler / The right direction
- 128 Movies** Forrest Gump, Traffik, Western roundup, Chocolat, Blow, Pollock, Hong Kong action double feature, The Gift, Waiting for Guffman, Doctor Who, more
- 134 Music** Bob Dylan, John Hiatt, Slipknot, Gorillaz, Maxwell, Isleys, 15 titles on DVD-Audio and Super Audio CD, more
- 156 S&V Picks** Things to do when you're not reading **S&V**



p. 134



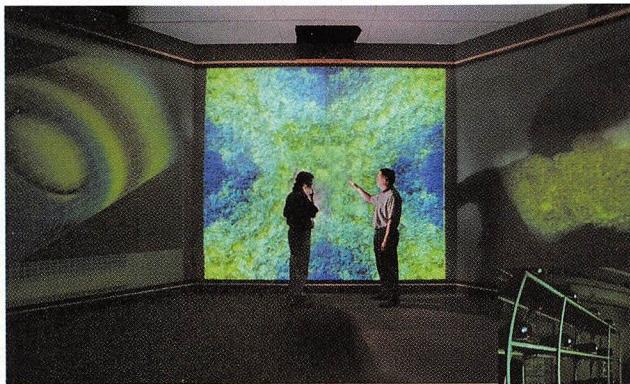
p. 124



p. 156

randomplay

EDITED BY BRIAN C. FENTON



Window on a New High-Def World

You're not likely to see it in your living room anytime soon, but scientists at the Sandia National Laboratories in Albuquerque have developed a 13 x 10-foot screen that can display 20 million pixels (maximum HDTV resolution is about 2 megapixels). The

display isn't intended for entertainment but for scientific visualization, a technique that permits researchers to interpret the results of a computer simulation or analysis. (The raw numerical results of such simulations, often consisting of millions or billions of



numbers, can otherwise be incomprehensible.)

The images are created using a technique called "massively parallel imaging," in which the output of 64 computers are fed to 16 Barco

LCD projectors and then beamed onto the screen. (Inset photo at left shows a researcher between the projectors and a screen.) According to a Sandia spokesman, from 10 feet away the images are "as good as your eyes are able to see." The project's next phase is the development of a 64-million pixel display. We hope they make that one widescreen.

Promises, Promises

Hoping to short-circuit the Napsterization of movies by offering legitimate downloads, five Hollywood studios announced that they will make some of their films available through the Internet. MGM, Paramount Pictures, Sony Pictures, Warner Bros., and Universal Studios said they will support a video-on-demand service to computer users who have high-speed access. The studios say that the service, code-named "MovieFly," will begin later this year or in early 2002.

Super DVDs Arrive

The first "Superbit" DVDs, said to "set a new benchmark in audio and video quality for the DVD format," were slated



Copy-Proof CDs

The record labels are up to their old tricks again. As we went to press, draconian technologies were being readied that could prevent consumers from copying music CDs they legitimately own and make it impossible to transfer that music to MP3-type portable players. Such "copy-proof" CDs are already on store shelves in Europe and are being quietly field-tested here in the U.S. The moves are reminiscent of the attempt by CBS Records to impose its Copy-Code system for LPs and CDs in the analog-cassette copying era — an outcome that **Sound & Vision** technical editor David Ranada played a role in averting.

As you read this, the five major record labels and many independents are all testing one (or more) of five systems designed to prevent CDs from being copied on home computers — and, in some cases, on home-audio

CD recorders. One system, Sony's key2audio, will even prevent music CDs from being played on PCs — including those sold by Sony. Other copy-protection systems include Macrovision's SafeAudio, Midbar Tech's Cactus Data Shield, and SunnComm's MediaCloQ. A fifth, unnamed system hails from the International Federation of Phonographic Industries (IFPI) — the record-industry umbrella group to which the Recording Industry Association of America belongs.

Given the sensitivity of the issue, copy-protection developers have refused to identify the record labels and CD titles involved in their tests. Despite their reticence, here's what could be gleaned as to the can's and can'ts of the respective systems: SafeAudio permits copying on home-audio CD recorders, MediaCloQ doesn't, and it couldn't be determined for Cactus, key2audio, or the IFPI system. Discs protected by key2audio aren't playable on PCs. Neither are MediaCloQ discs (without Internet authorization — see

below). Cactus, IFPI, and SafeAudio permit PC playback.

All of the companies claim protected discs are playable on home and mobile CD hardware — although they don't claim to follow the Red Book standards that give a record company license to produce CDs. Philips, co-developer of CD and the administrator of CD licenses, says it's studying the systems for violations of the standard and the license.

MediaCloQ, being tested by BMG, gives consumers some leeway in making copies. Although these discs can't be played or copied on a PC, disc owners can log onto the content-owner's Web site and download a key that unlocks a copy playable only on the disc owner's computer.

As might be expected, hackers have already taken a crack at these systems. At presstime, German hackers claimed they'd beaten key2audio on Windows PCs and Macs, while others said they'd defeated SafeAudio. Most companies say they can update their copy protection to foil such hacks.

— Stephen A. Booth

for introduction in early October from Columbia TriStar. The discs use a higher bit rate for encoding the video and audio — roughly twice that of normal DVDs — yet are said to be completely compatible with existing players. But don't expect extras on the Superbit discs — the space normally used for deleted scenes, making-of movies, and the like is re-allocated to hold the additional audio/video data. The first titles, priced at \$28, include *Crouching Tiger, Hidden Dragon*, *Johnny Mnemonic*, and *The Fifth Element*.

New Tricks for Camcorders

Panasonic and Sony are trying to shake up camcorder sales with new features and formats. Unveiled in Tokyo, Panasonic's newest MiniDV camcorder has a detachable digital still/movie



camera that can store 280-megapixel still images or more than an hour of MPEG-4 video on a 64-megabyte SD memory card.

Sony's twist is a new proprietary tape format, called MicroMV, based on MPEG-2 compression. The tape cassette is about the size of an audio microcassette, which allowed the company to shrink the cam to a mere 1 3/4 inches wide, 4 inches high, and 3 1/4 inches deep; it weighs just 11 ounces.

Both the Panasonic and Sony cams are "network-

15 Minutes with animation ace Andy Jones

Critics hailed the photorealistic animated feature Final Fantasy: The Spirits Within (Columbia TriStar) as a landmark achievement. (A production studio — Square Company — was created just to do the digital animation.) The hyper-real, computer-generated characters were so impressive that some film folk, a concerned Tom Hanks among them, speculated that these more compliant and cheaper robothespans might soon totally replace human actors. Andy Jones, the animation director who spent four years with his team on the project, sees things in less dramatic terms.

— Josef Krebs

Can computer-generated actors really replace human ones in a live-action feature?

I never like to use the term "replace." You'd only use computer-generated actors for a reason, and I don't think at that point that it would be replacing a human. It has to be cost-effective, and there has to be a good visual reason — like you need realistic-looking characters that have something about them that just isn't physically possible.

How did you get the animation to look different from what we've seen before?

I asked my team to forget what they'd learned about traditional animation — with exaggeration in staging and posing — and try to focus on the many subtleties in any human performance. Imitating them is extremely difficult. We had motion capture to help us with a lot of the body movement, and that made it a little easier, but facial animation is much more difficult. We actually had to use two actors and one animator to bring each of these personalities alive.

Final Fantasy cost about \$140 million to make but took in only \$35 million in U.S. theaters. Was it expected to be profitable, or was this more of a demonstration to show what could be done in future photorealistic projects?

A lot of the cost went into creating [Square

Company], trying to make it something like another Pixar. It was part of [director Hironobu] Sakaguchi's dream to make a studio that could operate at a level where you can make the films you want to and still make money off them.

Can independents like Square Company survive and compete against huge studios that have incredible distribution and promotional muscle?

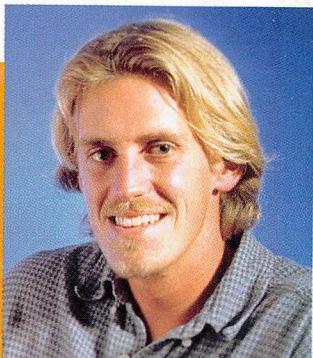
It's difficult, but if you make a good film, people will go. Obviously marketing and advertising is an important part of that, but I still think it's just a matter of making the films that people want to see.

Princess Mononoke also didn't do as well as was hoped in the U.S., despite being very successful in the rest of the world. Is there a resistance to Japanese-style animation in America?

I don't know if it's so much the style of animation as it is the story. A lot of people have been pretty well accustomed to the Disney-type story. It has a certain formula that works really well. People love every movie Disney makes, and each movie follows the same kind of formula. Whenever someone tries to break with that, it makes it more difficult for people to enjoy.

And Pixar and DreamWorks have stuck pretty closely to the traditional Disney formula?

Yes. Just look at *Shrek*. It makes fun of Disney's fairy tales, yet it is a fairy tale. That's the whole irony of it. *Shrek* is following the formula while at the same time making fun of it.



ready" and offer Bluetooth wireless connectivity. No word from either company on when or whether the high-tech cams will be available in the U.S.

Ad-Free TV

ReplayTV owners have always been able to leap a 30-second commercial in a single bound. Press the QuickSkip button four times,

and 2 minutes of recorded ad clutter vanish. But the new ReplayTV 4000 series video hard-disk recorders from parent company SonicBlue make the war against commercial clutter even easier to win: they include an AutoSkip feature that automatically bypasses commercials.

SonicBlue has licensed Commercial Advance tech-

nology already used in some VCRs. The system marks ads so that on playback the VCR automatically scans through them — of course, you still have to wait for the tape to fast-forward. Commercial blocks on a hard disk, though, can be bypassed virtually instantaneously. So by turning on ReplayTV's AutoSkip feature, the time spent fast-

Be Careful What You Wish For...

12 channels | 12 inputs | 3 zones | 13 digital audio inputs, including 1 AES/EBU

5.1-channel analog input | 24-bit/192kHz D/A converters | 3 subwoofer outputs

Analog pass through | 4 HDTV compatible component video inputs | 8 S-video inputs

5 composite video inputs | 4 Analog Devices SHARC® 32-bit DSP engines

24-bit/96kHz internal processing | Cirrus Logic's Crystal® CS49326 DSP decoder

Logic 7® processing | Dolby® Digital, Pro Logic II, and Pro Logic | dts® and dts-ES

THX Surround EX™ | THX® Ultra certification | RS-232 upgradeable software

3 internal slots and rear panel options plate | 2 digital audio outputs | RS-232 control

Back panel IR input | 3 trigger outputs | Balanced version available (shown)



MC-12

Digital Controllers

from **Lexicon**

H A Harman International Company

forwarding through a commercial is reduced to milliseconds.

Unfortunately, unlike previous ReplayTV upgrades, the new software cannot be downloaded into existing models, like those manufactured by Panasonic and sold under its ShowStopper brand. And since the new 4000 series (still made by Panasonic but sold by SonicBlue under the ReplayTV brand) requires broadband — cable-modem or DSL — access, not everyone who'll want one of the new recorders will be able to accommodate it. Their built-in dial-up modems are used only for diagnostic purposes.

In addition to downloading the program guide through a broadband connection, 4000 Series recorders will be able to record "iChannels" from the Internet. Although ReplayTV was sketchy about what kind of content will be available on those channels, they should be able to provide the kind of true video on demand computer users with broadband connections are already beginning to experience — the difference being that the program can be enjoyed on your TV. Also, content on multiple ReplayTVs can be shared in different rooms through a home network.

Four models were expected to be available this month: the 40-hour Model 4040 (\$699), the 80-hour 4080 (\$999), the 160-hour 4160 (\$1,499), and the 320-hour 4320 (\$1,999).

— Michael Antonoff

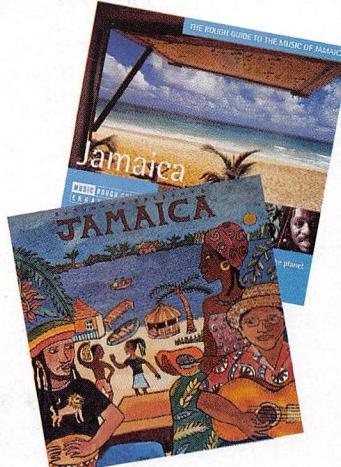
SACD Gains Support

Universal Music Group, the world's largest record label, has joined Sony and EMI in supporting the Super Audio CD format. EMI is releasing DVD-Audio discs as well, but Warner Music continues to be the only major label releasing a significant number of titles in that format. BMG has yet to commit to either SACD or DVD-Audio, and Universal hasn't ruled out the possibility of releasing DVD-Audio titles.

According to Philips, there are about 450 SACD titles available worldwide, but only 50 of them are multichannel recordings, a number that should increase once Universal starts rolling out discs. There are about 100 DVD-Audio titles available, all of them multichannel.

Kingston Ain't Big Enough for the Both of Us

Or is it? Two record labels, Putumayo World Music and the World Music Network/Rough Guides, have been compiling the globe for



some time now, and they've landed in the same place: Jamaica.

Rough Guide's *Jamaica* is bigger, serving up 20 tracks totaling more than 66 minutes — compared with 11 tracks on Putumayo's totaling almost 43 minutes — and the enhanced CD provides travel tips in its multimedia area. But Putumayo boasts the bigger names, including Jimmy Cliff, Joe Higgs, Peter Tosh, Culture, and Black Uhuru. (Both discs have Toots and the Maytals; neither has the tough-to-license Bob Marley.) In truth, the approaches are different, with the Putumayo CD focusing on reggae and Rough Guide's tracing how mento, ska, rock steady, and other genres led up to reggae.

So it all depends on your approach. You can sail Putumayo's cruise ship, which can be lively but also a bit superficial. Or you can join Rough Guide's archaeological dig, which can be enlightening but

also a bit musty. To help decide, check out putumayo.com and worldmusic.net.

— Ken Richardson

A/V Digest

• THX Ultra2 is Lucasfilm's newest consumer audio specification. Ultra2-certified receivers will have seven channels of amplification for use with four surround speakers, two at the side and two in back. Music and soundtracks encoded with 5.1 (or more) channels will be processed automatically to use the four surrounds. The spec also certifies that controllers and receivers are capable of switching wideband component video.

• Apple Computer received an Emmy award for creating FireWire (a.k.a. IEEE 1394 and i.Link), which has become a key technology in TV studios for moving video on and off computers.

• According to an analysis by market-consulting firm Frost and Sullivan, home entertainment is the fastest growing area of the consumer-electronics industry, thanks mainly to sales of surround sound speaker systems. Almost three quarters of a billion dollars was spent in the U.S. last year on speakers. That number is expected to top \$1 billion by 2007.

S&V

EXTRAS! EXTRAS!

MARC PHAES

Shrek

DreamWorks \$20

Since everyone and his donkey went to the cinema to see *Shrek*, DreamWorks has made this two-DVD set an experience that goes beyond the movie. To begin with, the movie itself is different, featuring an extended ending that picks up where the theatrical release left off. (The party continues and you get to see what *Shrek*'s 150 characters are up to after the final wrap.) In all, 15 minutes of new animation was developed exclusively for the DVD, some of which is used in the menus. Other previously unseen footage is offered in the form of de-

leted and extended scenes. The DVD also presents a novel DVD-ROM feature called the ReVoice Studio, which lets you replace the voice of one of the film's characters with your own voice in selected scenes. Upon playback, you can hear whether you did as good a job as actors like Mike Myers (*Shrek*) and Eddie Murphy (*Donkey*).

There's also a heap of more conventional extras, including two behind-the-scenes featurettes, a filmmaker's commentary, and a selection of still shots showing how the looks of several characters evolved during the various design stages. For pure fun, you'll also find bloopers and outtakes, Baha Men and Smash Mouth music videos, and "interviews" with *Shrek*, Fiona, Lord Farquaad, and Donkey. You'll also get 17 interactive games for kids and a behind-the-scenes peek into a storyboard meeting in which the animators act out their creations.

— Josef Krebs



Definitive's Bipolar



“Fantastic... Superspeakers!”

-Brent Butterworth, Home Theater Magazine

“Startlingly real...bipolar speakers are amazing”

-Shane Buettner, Widescreen Review Magazine

Our sleek BP3000TL, BP2000TL, BP2002TL, BP2004TL and BP2006TL superspeakers and complete matching surround systems all combine our revolutionary bipolar technology with awesome built-in powered subwoofers for ultimate music and home theater!

“These speakers are amazing...my universe was shaken”

-Jeff Cherun, Home Theater Magazine

If you're looking for the finest sounding music and home theater speakers available, visit your nearest Definitive dealer today and listen to our critically acclaimed, award-winning Bipolar Power Towers and complete timbre-matched home theater systems. You'll agree with the world's top reviewers that Definitives are clearly your #1 choice for the ultimate listening experience.

“The highest praise any speaker system can garner”

-Rich Warren, Sound & Vision

Experts agree that bipolar loudspeakers are sonically superior to all others for both music and home theater. In fact, top expert Brent Butterworth wrote, “Bipolar systems are as close as we've come to finding the Holy Grail of home theater.”

Only Definitive's revolutionary bipolars have two complete sets of high-definition drivers which radiate sound front and rear in an omnidirectional pattern exactly the way sound is produced naturally.

The amazing sonic benefits dramatically recreate a remarkably lifelike room-filling three-dimensional soundfield which will literally put every listener in your room right in the concert hall or into the movie itself.

“They are a home theater steal and a music lover's find”

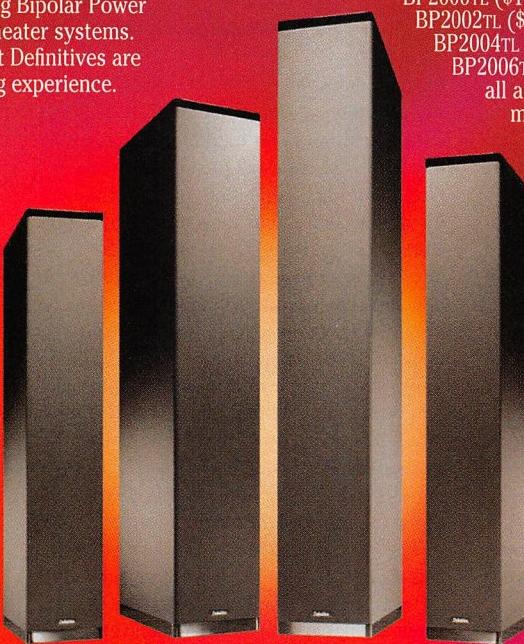
-Fred Manteghian, Stereophile Guide to Home Theater

With their awesome built-in high-powered subwoofers, the BP3000TL (\$2250 ea. w/ an 18" sub and 1000 watt amp), BP2000TL (\$1499 ea. w/ a 15" sub and 500 watt amp), BP2002TL (\$1099 ea. w/ a 12" sub and 250 watt amp), BP2004TL (\$799 ea. w/ a 10" sub and 250 watt amp) and BP2006TL (\$599 ea. w/ an 8" sub and 250 watt amp) will all achieve a unique combination of superior musicality and thunderous power for superb music and movie perfection in your home.

“A reference standard...the reproduction is truly like a hologram”

-Prestige Audio Video, France

In addition to their totally unsurpassed sonic performance, all 8 Definitive bipolar towers (from the \$299 BP6B to the top-of-the-line BP3000TL) also deliver absolutely unequalled value. And when you combine them with our perfectly timbre-matched center channels and surrounds, you will have a breathtaking home theater system which, to quote *Video Magazine*, “will make you literally feel like you're part of the movie.” You must experience these Grand Prix Award-winning superspeakers today!



For information and dealers
www.definitivetech.com



Definitive Technology®

The Leader in High-Performance Loudspeakers

11433 Cronridge Dr. • Owings Mills, MD 21117 • (410) 363-7148

See our dealer list on page 38

feedback



High-Res-Audio Frustration

I enjoyed Ken Richardson's September review of the DVD-Audio release of Fleetwood Mac's *Rumours* and the Super Audio CD (SACD) of Billy Joel's *The Stranger*. But in the last paragraph he says that the Fleetwood Mac album is available only on DVD-Audio and the Billy Joel only on SACD. This means both formats are doomed.

Why would anyone buy a player for one format knowing that one or more major record companies will release titles only in the other format? And no sensible person would spend (way too much) money to have both formats. Sony Music will never release DVD-Audio discs because its parent company wants us to buy its SACD players. So we'll have to wait and see which format our favorite music is released in and hope one of our favorites doesn't end up in the other one. We should boycott both new formats to protest this clearly unnecessary format war.

Peter Hillman

Stevenson Ranch, CA

In the battle between DVD-Audio and SACD, the buying public has made its preferences known. And, the winner is . . . MP3! And, the runner-up is . . . Dolby Digital!

What possible use could there be for more bits of resolution on most pop recordings, which are already compressed so there are only a few decibels between peak and average sound levels? The vocals on many pop recordings are sent through an Aphex processor or some other box that's basically a distortion generator, and they're accompanied by fuzz guitars playing through an overloaded tube amplifier with a 12-inch full-range speaker. Throw in a 16-bit synthesizer keyboard, drums that are clipped and compressed until they sound like a disco drum machine, and an acoustic guitar recorded with microphones that can't reach 20 kHz, and what good is a 96-kHz sampling rate?

The new high-resolution formats only really make a difference with classical music, but that's a small market sector that can't by itself ensure their success. The mass market demands improvements that are unmistakably audible even through Blue Light Special stereos. High-resolution audio is a hard sell to a generation raised on amplified music.

Dennis L. Green

Detroit, MI

I live in the greater Tampa Bay area, and I have yet to find any store that carries DVD-Audio discs. Most salespeople look at me as

if I'm crazy and admit they've never even heard of the format. Now the good news: next time you're online, go to dtsonline.com, and you'll find about 100 DVD-Audio selections.

Gernot Simon

Oldsmar, FL

Don't feel too bad about the lack of DVD-Audio titles and awareness in the Tampa Bay area — some stores in New York City have the same problems. And if you go to dtsonline.com, you will indeed find about 100 selections, but all but ten are 5.1-channel DTS CDs, not DVD-Audio discs (four of those ten are reviewed on page 138). For a complete list of available DVD-Audio titles, go to the DVD Entertainment Group's dvdisinformation.com, though you can't buy the discs there. Amazon.com, Barnes & Noble (bn.com), and Tower Records (towerrecords.com) have now all added DVD-Audio sections to their Web sites (under Music), and each offers dozens of titles. But only Tower among these three also has an SACD section. For smaller labels, try their own Web sites.

For a real good laugh, just try to buy a DVD-Audio or Super Audio CD player from a store in downtown New York City or Philadelphia. Some of the bigger stores have a player or two — but they're hooked up for *two-channel* analog playback! Better yet, try to find recordings to play on the few players you can find. Just call your local music chain!

Bob Mallis

Whitehouse Station, NJ

Given today's integrated-circuit and logic-array technology, I think the SACD vs. DVD-Audio solution is no more complicated than 45 rpm vs. 33 rpm was for vinyl records: different "format," same reproducer. All the major digital audio chip makers (Cirrus Logic, Burr-Brown, Analog Devices, and others) are developing or have developed integrated circuits that can decode all the major digital audio formats, while providing an easy software upgrade path for any future format. There's no reason a single chip cannot be produced that would handle both SACD and DVD-Audio (whatever its final specification might be) as well as Red Book CD, HCD, and 16-bit/44.1-kHz digital audio upsampling to any of the higher-resolution digital formats.

The record companies produce software, and there's no reason all formats (including the existing CD) cannot coexist side by side given a suitable easily designed universal digital audio player.

Charles Hansen

Ocean, NJ

I got a kick out of Jeff Lenow's letter in September "Feedback" — I, too, have put my discretionary dollars elsewhere, into boating instead of A/V equipment. But if he's going to wait for the universal "alphabet soup" player that will play both DVD-Audio discs and SACDs, what's he going to do about digital photo media? CompactFlash, Smart-Media, floppies, Memory Sticks, and CD-Rs are just some of the choices. What's that, you say? You just load them in your computer, and it no longer matters? Will that be through the serial, SCSI, FireWire, or USB port? Let's not even talk about platforms and software!

I, too, would like to see manufacturers use only mature technology, but those days are long gone. The frenzy to get to market first, combined with the Microsoft "ship first, fix later" approach, has permeated virtually every industry. We all need to start thinking long-term and slow down a little!

John Jost

via e-mail

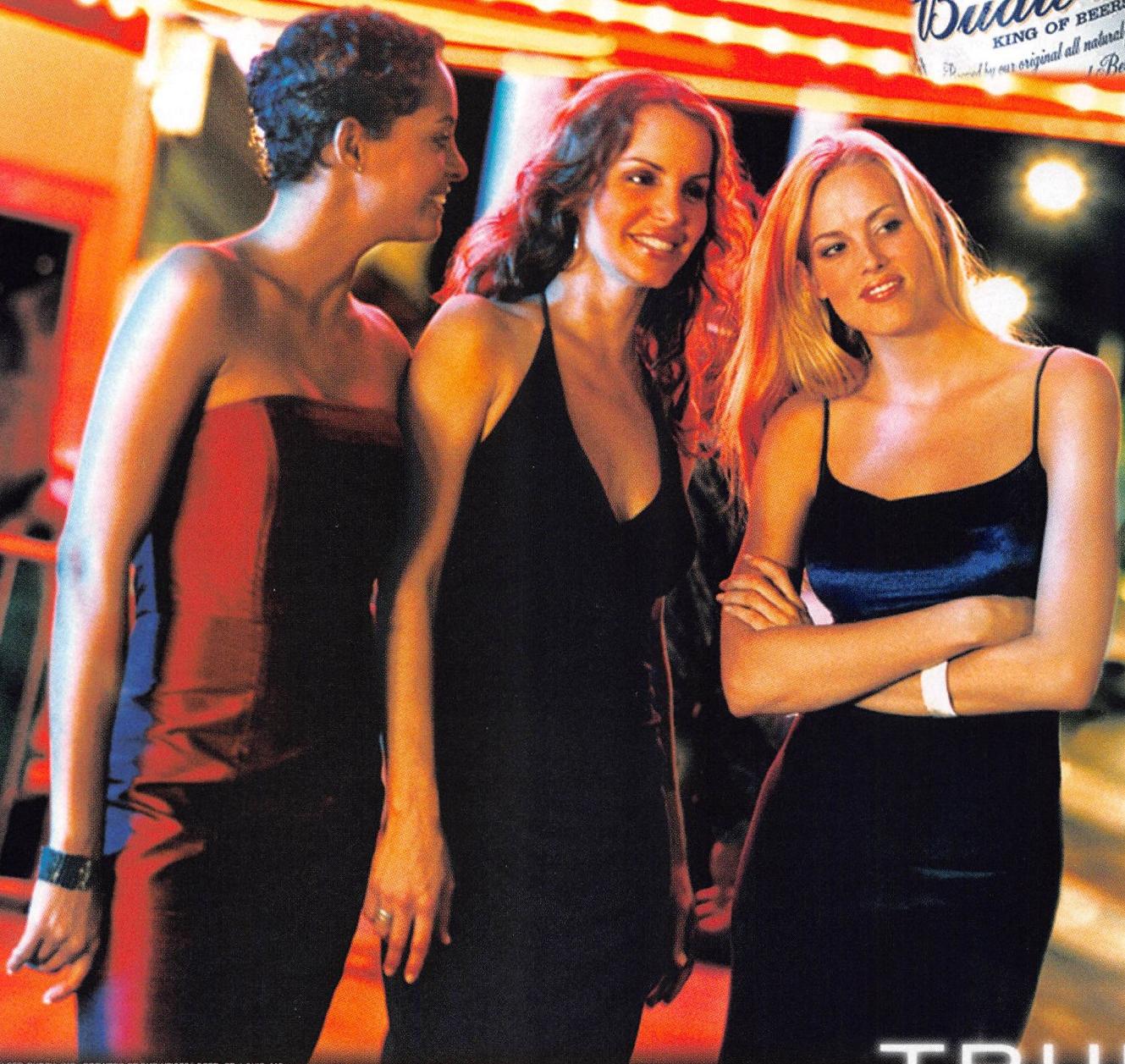
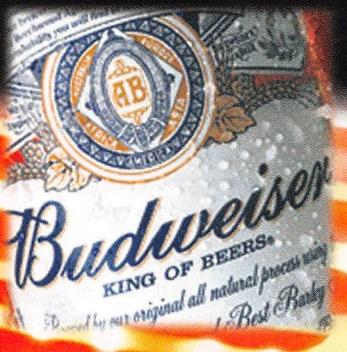
I purchased quadraphonic equipment in the 1970s and found it a fascinating look into the future. Well, it took nearly 30 years, but here it is. I'm not wasting my time squabbling over SACD vs. DVD-Audio. After reading your magazine and the comments of people deeply involved in the recording business ("Back to Analog," July/August), I chose SACD.

It sounds great, but I'm disappointed in the poor selection of titles. Telarc provides the best selection of great-sounding discs on its Web site. Sony makes great equipment, but its selection of titles is mediocre at best. And even though serious sound fanatics should plan on buying a new disc player every four to five years, it's so-o-o stupid to release discs playable only on an SACD machine. Sony needs to make all of its discs user-friendly for both old players and new ones. In addition, it should take the old Columbia quad recordings, remaster them for SACD, and get lots of exciting multichannel recordings out there for those of us willing to take a chance.

Steve Livingston

Peabody, MA

Audio/video manufacturers are taking the fun and excitement out of our hobby and replacing them with frustration. To use the incompatible high-resolution audio formats, DVD-Audio and Super Audio CD, I'd have to buy two players. And I couldn't hook up either kind of player to my top-of-the-line preamp anyway, because it doesn't have a 5.1-channel analog input and the players have no high-resolution digital outputs! It's clear that



TRUE.

©2001 ANHEUSER-BUSCH, INC., BREWERS OF BUDWEISER® BEER, ST. LOUIS, MO

THIS BUD'S FOR YOU.®

Budweiser
budweiser.com

feedback

these products weren't made with typical audiophiles like me in mind, so who *are* they being made for? These formats are doomed because the manufacturers can't provide a universal player with a digital output.

Somewhere along the line, the record labels became more important to the manufacturers than the customers. When did I become the enemy who can't be trusted to use certain features? And now I'm expected to get excit-

ed and buy this stuff? This "lock up the content 'til it's almost unlistenable or unwatchable" paranoia is taking a staggering toll on my enjoyment, and I'll bet on yours, too.

**John Werner
Cullman, AL**

Hearing Appreciation

Regarding Ken C. Pohlmann's "Digital Horizons" column in September ("Hard of Hear-

ing"), I advise everyone to purchase a pair (or two) of *good* ear plugs and to carry them all the time. It may sound crazy, but have you ever just stopped into a small tavern or club to have a bite and listen to some music, and the band comes out with amplifiers designed for an arena in a space that's 2,000 square feet at most? Even with the volume turned down, it can do significant damage to your hearing.

I have been listening to all types of music since the 1960s, as well as being a competition shooter for 25 years, and thanks to the use of ear plugs I have excellent hearing. I recommend a type like the Sonic II hearing protectors by North. They're comfortable, invisible, and easy to clean, the rubber is replaceable when it tears, and they come with a carrying case for under \$10. Such a deal to save something that will never return once it's gone.

**Paul M. Maguire
Portland, OR**

HDTV Misconnection

The "Multimedia Maven" item called "Gaming in High Def?" (September) states that anyone buying an X-box system "will need a special A/V pack that will include S-video and digital audio outputs." Whoops! S-video can't deliver HDTV. Shame on you — you should know better!

**Eli Bateman
Minneapolis, MN**

You're absolutely right, and we do know better. Unfortunately, what we neglected to clarify is that the new game consoles use proprietary outputs, and game enthusiasts aspiring to a higher resolution will have to wait until special cables are available with the proprietary plug on one end and component-video plugs on the other end.

Toed-In Speakers

I would like to comment on the procedure for measuring speakers described by Tom Nausaine in "Behind the Numbers" (September). Ken Pohlmann's review of the Klipsch Synergy SF-2 in "Surround Sensations" in the same issue points up an area that needs to be addressed when making measurements, namely, the manufacturer's recommendations about speaker placement.

As a long-time owner of Klipsch speakers (although not of the ones under review), I know that the company recommends a toed-in placement, on-axis with the main listening position, because of the speaker's horn-loaded design. So Mr. Nausaine's practice of measuring the front left and right speakers facing directly out from the wall behind them, with double weighting for the 30° off-axis response, cannot do justice to any Klipsch speakers. In addition, Klipsch uses horn loading to minimize room reflections and off-axis sound,

Dimension

S O U N D S C I E N C E

TANNOY
WIDEBAND
TECHNOLOGY

The Tannoy Dimension series incorporates the very latest wide bandwidth and Dual Concentric™ technology in an acoustically optimized cabinet. An innovative blend of beautiful styling and ground-breaking technical achievement.

Sound and science in perfect harmony.

TANNOY

TGI North America Inc.

335 Gage Ave., Suite #1 Kitchener, ON Canada N2M 5E1

Tel:(519)745-1158 Fax:(519)745-2364 Toll Free Dealer Fax:(800)525-7081
e-mail: inquiries@tgina.com Literature requests: litplease@tgina.com

www.tannoy.com



What you lack in talent, you can make up for in volume.

Looking for more opportunities to focus on perfection? Picture this: a single Memorex Flash Memory card lets you shoot, transfer and email millions of photos. Or, for pennies a meg, our Pocket CD™ captures 140 high-res images and lets you transfer them directly to your PC. So, if you're looking for the capacity to capture the world, visit us at memorex.com.



Memorex®

Is it live or is it Memorex?™

©2001 Memorex Products, Inc.

THE NO. 1 SELLING BRAND IN
DIGITAL MEDIA —
N. 1
BRAND

feedback

whereas your measurement procedure maximizes the importance of reflected and off-axis sound.

Mr. Pohlmann's review doesn't mention whether he listened to the Klipsch speakers on-axis or off-axis. It has been my experience that the treble harshness he mentions hearing could very well have been caused by listening to the horn-loaded tweeters off-axis.

I suspect that in most situations Mr. Nou-

saine's measurement procedures are valid. However, there should be some flexibility if a manufacturer's placement recommendations run contrary to your usual procedures.

**Kevin Schaefer
Ellicott City, MD**

Our measurements are standardized so you can fairly compare one speaker's performance with another's. Nonetheless, Tom Nousaine says that the response of front left/right (or

stereo) speakers measured 30° off-axis is almost always very similar to their on-axis response, with only a slight loss of extreme highs in most cases. The Klipsch speakers did show a reduced level of extreme treble at 30° off-axis, he says, but the strong irregularities between 200 and 3 kHz were the main factors in its sound, and these were evident at every angle between 0 and 30°. Also, remember that our averaged results do include the on-axis response.

One of the goals of multichannel sound is to serve more than one listener. Speakers that require precise on-axis listening may not be as well suited as others for home theater applications. And no matter what the manufacturer may recommend, many people tend to position speakers perpendicular to walls and to their TV screens. We therefore measure speakers placed as they're most likely to be used, while for our listening tests, our reviewers begin with the manufacturer's recommended positioning and adjust it if necessary for best performance in the reviewer's particular room. In the case of the Klipsch Synergy SF-2 speakers, Ken Pohlmann listened to them mainly on-axis but he listened off-axis as well.

Home-Made High-Def

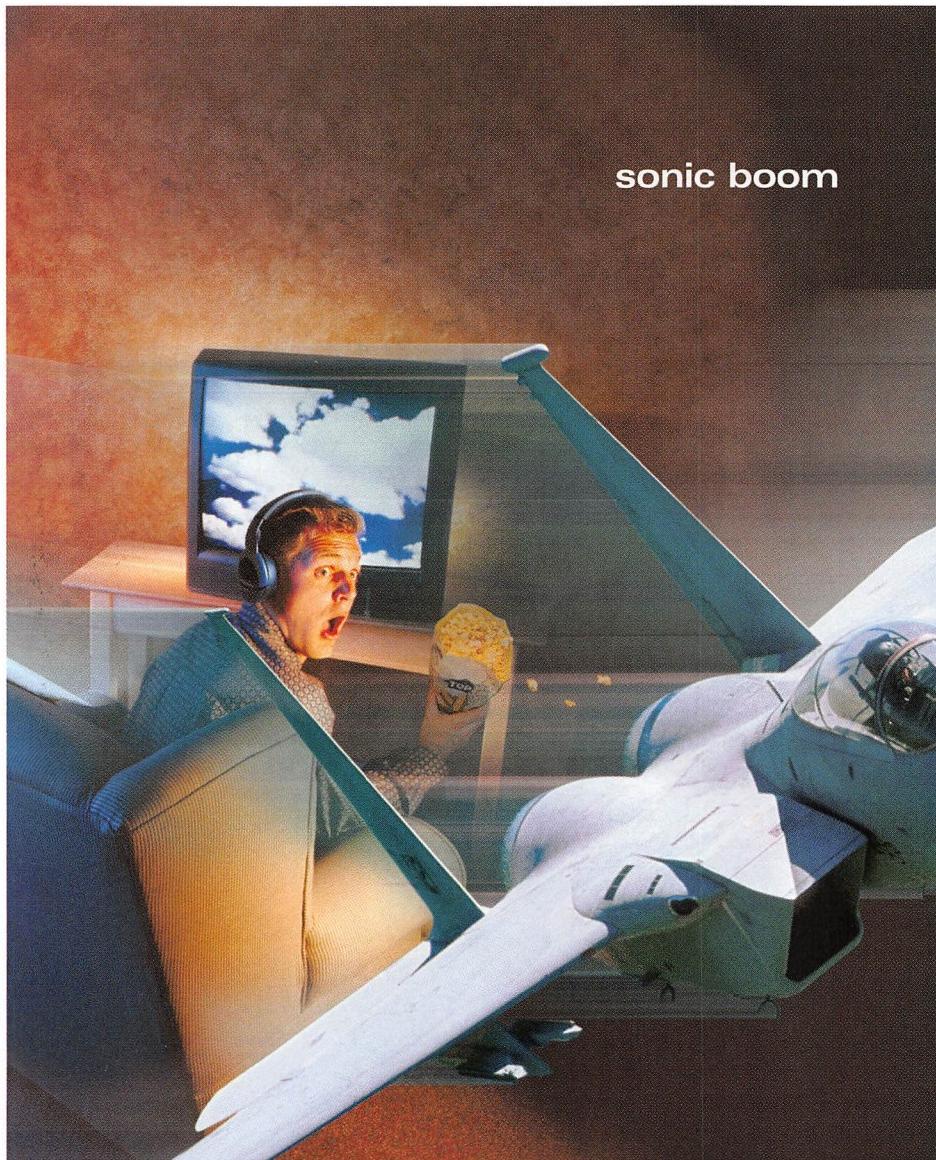
After reading the "Quick Takes" review of the Telemann HiPix HDTV tuner card for PCs (June), I decided to build my own high-definition hard-disk recorder (HDR). I took an old 800-MHz Pentium III PC and added the Telemann card, two 80-gigabyte drives, and a DVD-RAM recorder for archiving. The thing works incredibly well. My only complaint is the lack of a VGA input in the Telemann — if there was one, I could record high-def programs from my Dish Network HDTV satellite receiver. Other than that, for anyone who's been looking for a way to record high-def programming, a do-it-yourself HDR is the way to go.

**Tom DeFelice
Leominster, MA**

Correction

In September's "Surround Sensations," the price of the Mission's m70 series was incorrectly stated as \$1,850 in the introduction (page 87). The \$1,450 price given in the table on page 89 is correct.

S&V



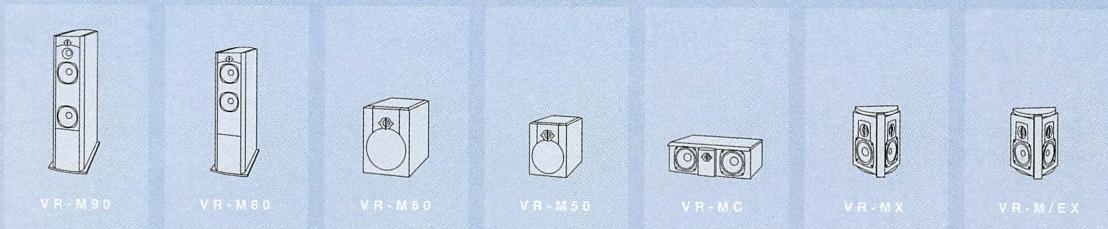
RS Series 900 MHz RF Wireless Headphones

Wireless headphones that sound good enough to be called Sennheiser!

Pictured: RS 65 Wireless Headphones with SRS® Surround

SENNHEISER®
1-877-SENNHEISER • WWW.SENNHEISERUSA.COM

We welcome your letters. Send e-mail to soundandvision@hfmag.com and regular mail to Editor, Sound & Vision, 1633 Broadway, New York, NY 10019. Please include your name, street address, and phone number for verification; only your name, city, and state/country will be printed. All letters are subject to editing at our discretion.



BOSTON REFERENCE SPEAKERS

Can't live without music? You owe it to yourself to audition our new VR-M reference speakers, the finest representation of what we call the Boston Sound™. Clean. True. Uncolored. This is an uncompromising loudspeaker system, cleverly disguised in a rich, hardwood finish. Hey, at least you've got your priorities straight. Live to listen™.

For more information or to find the dealer nearest you, visit www.bostonacoustics.com

A black and white photograph of a woman lying on her stomach on a light-colored carpet in a modern living room. She is holding a small electronic device, possibly a remote control. In the foreground, a large, dark, rectangular speaker stands upright on a wooden floor. The background shows a sofa, a lamp on a stand, and other furniture, suggesting a comfortable home environment.

FOOD. WATER. MUSIC.
PICK TWO.

This is what's known as "The Tease."



**Entré
Entertainment
Hub**

**VR-5900
A/V Receiver**

**DV-5900M
400 + 3 disc
DVD Audio/Video
Changer**

Owning it would be “The Climax.”

Totally Networked Home Entertainment

Digital Storage and Internet Connectivity

Extraordinary A/V performance

KENWOOD
sovereign

***Faroudja Progressive Scan and Video Enhancer technologies
for unprecedented quality***

Kenwood Sovereign combines conventional A/V performance with the new benefits of digital storage and connectivity. With the entirely new technologies incorporated in our system, you might expect to see a page covered with benefits and features that no other system has. But what fun would that be? Witnessing them first-hand, now that's another story. Kenwood Sovereign. Highly acclaimed, highly arousing home entertainment.

FIND OUT MORE. ORDER OUR FREE DVD TODAY AT KENWOODUSA.COM

OR GET ONE FROM YOUR LOCAL KENWOOD SOVEREIGN RETAILER.



new products

Hot gear from the world of home entertainment



Sony

Rated to deliver 110 watts of power to each of six channels, Sony's STR-DA5ES digital surround receiver is ready for 6.1-channel DVD soundtracks. If you're torn between DVD-Audio and Super Audio CD, the receiver's two sets of multichannel analog audio inputs let you hook up both at once, and one set can even handle 6.1-channel sources. The receiver features a multi-channel/two-channel direct analog mode that shuts down all digital circuitry, which is said to optimize sound quality from analog sources. High-definition TV signals can be routed through the two sets of component-video jacks, and there are also four S-video inputs, along with two coaxial and four optical digital audio inputs. An RS-232 port provides for future software upgrades. Price: \$1,500. 800-222-7669, www.sel.sony.com



A phase switch and magnetic shielding give you some latitude in placing the sub, and the crossover is continuously variable from 40 to 120 Hz. Rounding out the rear control panel are line- and speaker-level inputs and outputs. The high-density wood cabinet is finished in black woodgrain vinyl with a black cloth grille. Spiked feet are included. Price: \$500. 805-584-9332, www.cerwinvega.com

Panasonic

Helping to shove tape media over to obsolete status, Panasonic's VDR-M10 camcorder records video and still images on 3-inch DVD-RAM discs. Each 2.8-gigabyte double-sided disc can store 60 minutes of MPEG-2 video in Fine mode or 120 minutes in Standard mode. When recording, the cam automatically finds the blank space on the disc, so there is no danger of recording over something you want to keep. The cam's 1.1-megapixel CCD image sensor has an effective resolution of 720,000 pixels for video and 1 million pixels for still photography. Composite- and S-video outputs, a USB port, and a 3½-inch color LCD viewscreen are provided. Price: \$2,500.

800-211-7262, www.panasonic.com



Cerwin-Vega

Looking like a subwoofer that's been on Slim-Fast, Cerwin-Vega's RL-28W stacks dual 8-inch drivers in a lean 10 x 23¾ x 22-inch cabinet. Its amp is rated to deliver 200 watts of average power, and frequency response is given as 35 to 120 Hz ±2 dB.

A phase switch and magnetic shielding give you some latitude in placing the sub, and the crossover is continuously variable from 40 to 120 Hz. Rounding out the rear control panel are line- and speaker-level inputs and outputs. The high-density wood cabinet is finished in black woodgrain vinyl with a black cloth grille. Spiked feet are included. Price: \$500. 805-584-9332, www.cerwinvega.com

Snell

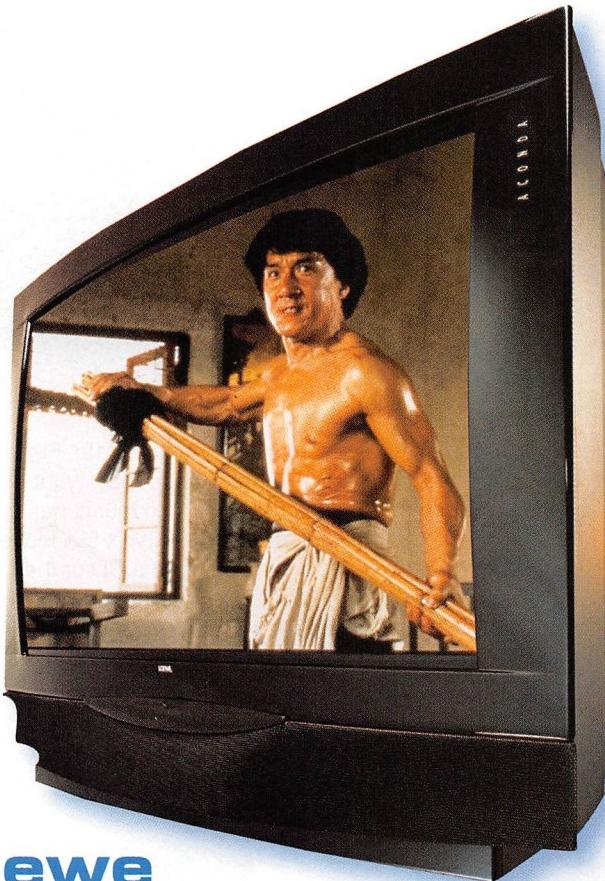
Here's one speaker the cat definitely won't knock over — Snell's XA Reference stands just over 6 feet tall. The tower is a three-way design with eight drivers. Two 4½-inch midranges are positioned above and below a 1-inch titanium-dome tweeter, pairs of 8-inch aluminum-cone woofers are mounted above and below the midrange/tweeter trio, and a 1-inch rear-firing aluminum-dome tweeter completes the array. The configuration is said to result in even vertical dispersion, and its rated frequency response is 28 Hz to 20 kHz ±2 dB, sensitivity 88 dB. The cabinet, finished in black oak veneer, has a footprint of 12½ x 18 inches. Price: \$25,000 a pair.

978-373-6114, www.snellacoustics.com



Kenwood

You'd think being a 403-disc DVD mega-changer would be enough. But Kenwood's Sovereign DV-5900M also boasts the ability to play CDs, CD-Rs and CD-RWs with MP3 files, and even DVD-Audio discs. On top of that, it has a progressive-scan component-video output with 2:3 pulldown to enhance film-based video. The changer mechanism can handle double-sided discs with ease, and the six-channel analog audio output features bass management for DVD-Audio signals. Three of the disc slots, intended for rented or borrowed discs, have their own play and eject buttons. Price: \$1,500. 800-536-9663, www.kenwoodusa.com



Loewe

On looks alone, Loewe's 240-pound Aconda ACO 9383 38-inch wide-screen TV stands a cut above most other direct-view sets. But once it's connected to an outboard high-definition TV tuner, the set displays 1080i-format images that will impress you even more. Standard NTSC signals are converted to 480p (progressive-scan) format for display, and there's also a user-controllable 2:3 pulldown function to improve the look of film-based video. One VGA, one wideband component-, three composite-, and three S-video inputs provide plenty of hookup options. An RS-232 port allows connection to an external control system. Finish options are high-gloss black or metallic. Price: \$5,500.

800-736-7679, www.loewetv.com



new products



Fisher

If your desktop CD player is taking up valuable real estate, Fisher's 2-inch-deep PH-DTA100 minisystem will let you get back your space without giving up your sounds. If 2 inches is *still* too much, hang it on a wall — the attractive system will take up a mere 16½ x 5½ inches of wall space. The timer can be set to wake you up to a CD or the radio, and the AM/FM tuner has 20 presets. The system comes with a remote control and an extra set of darker grille covers. That spinning disc on the wall making you dizzy? The player door doubles as a picture frame. Price: \$150. 818-998-7322, www.fisherav.com



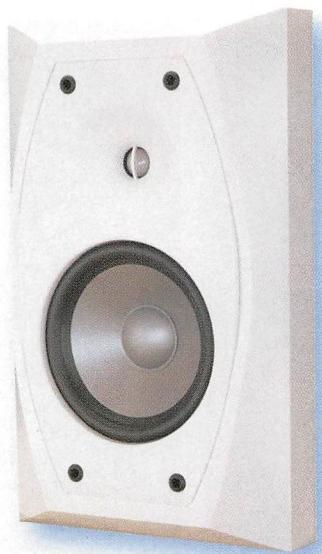
Paradigm

Giving you theater sound without theater-size speakers is the idea behind Paradigm's six-piece Cinema 90 system. Each front left/right and surround speaker measures just 4½ x 7½ x 6 inches and has a 4½-inch woofer coupled with a 5/8-inch dome tweeter. The Cinema CC center speaker has the same drivers but adds a second woofer. The 10-inch, 100-watt PDR-10 subwoofer is rated down to 27 Hz –3 dB. Price: \$936 (speakers also sold separately).

905-632-0180, www.paradigm.com

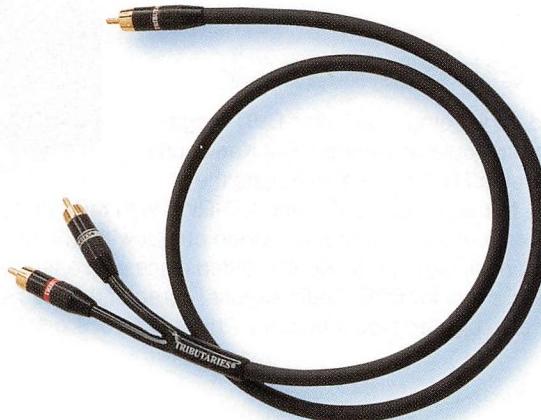
Infinity

Everything in consumer electronics seems to be climbing the walls these days, and Infinity's OWS-1 speaker continues the hanging trend. At 4½ inches deep and 6½ pounds, the speaker is designed for wall mounting and occupies an area of 9 x 14½ inches. The ceramic-coated aluminum drivers — a 6½-inch woofer and ¾-inch tweeter — deliver a rated frequency response of 70 Hz to 20 kHz ±3 dB; sensitivity is 90 dB. The OWS-1 comes in either black or white. Price: \$319 a pair. 800-553-3332, www.infinitysystems.com



Tributaries

You still can't get something for nothing, but one audio signal can be split into two with Tributaries' Y-connector subwoofer cable. It allows subwoofers with left/right audio inputs to be elegantly connected to A/V receivers that have a single mono output and helps eliminate the potential for noise pickup. A high-gloss insulator encircles the two center conductors. The conductors are made of multistranded copper, and each one has its own shield to protect against noise. The cable is available in lengths from 1 to 8 meters. Price: \$45 for first meter, \$2.50 every extra half-meter. 800-521-1596, www.tributariescable.com



new products



BDI

Finally got the plasma TV you've always wanted but reluctant to drill holes in your walls to hang it? With BDI's Callisto plasma-TV stand, you won't have to. Your slim plasma screen can hang on Callisto's height-adjustable plywood panel (up to 61 inches high), as long as it's 50 inches (diagonal) or smaller. Finished in a natural cherry veneer with steel supports, the stand also has a raised glass shelf to hold a center-channel speaker and a ventilated 53 1/4 x 8 1/2 x 25-inch shelf space for a couple of components. A wire-management system routes cables from the TV through the steel supports. Price: \$1,795. 800-428-2881, www.bdiusa.com

Blaupunkt

MP3 is hardly passé, but a growing number of listeners are using other audio-compression schemes. Enter Blaupunkt's San Jose MP41, which claims to be the first in-dash receiver to play not only CDs with MP3 files but discs with Windows Media Audio (WMA) files, too. Search functions let you find songs on crowded discs quickly, and the front-panel display shows file and folder names. The MP41's amp is rated to deliver 50 watts to each of four channels, and it has preamp outputs as well. A credit-card-sized remote control is supplied. Price: \$399.

800-950-2528, www.blaupunkt.com



Monsoon

Want desktop speakers but can't find any that aren't obtrusive? Don't get mad — get flat. Instead of cones and domes, Monsoon's MM-702 desktop speaker system uses planar-magnetic drivers for its two satellites, so they're a mere 1/2 inch deep. The skinny guys can stand on their own with the supplied adjustable stands, and they're accompanied by a 7 1/4 x 9 1/2 x 11-inch powered bass module. System bandwidth is rated as 50 Hz to 20 kHz. A remote volume-control "puck" and an AC adapter are supplied. Price: \$149.

604-271-2237, www.monsoonaudio.com

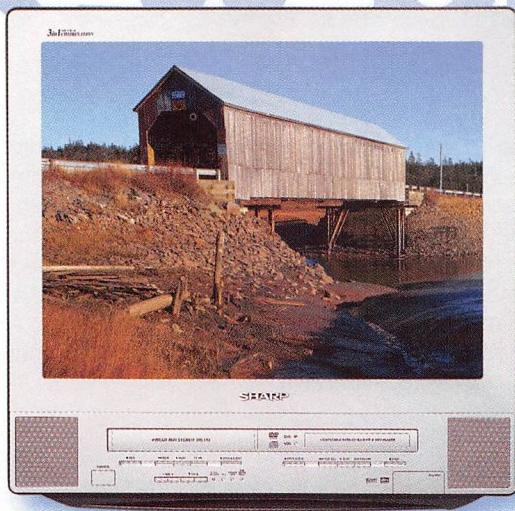
Anthem

Ready to control even the most elaborate home theater, Anthem's Audio Video Master 20 (AVM 20) is at your service. The THX Ultra-certified preamp/processor decodes 5.1- and 6.1-channel Dolby Digital and DTS soundtracks and has both balanced XLR and RCA audio outputs. Its multi-channel analog inputs for DVD-Audio and Super Audio CD signals include bass management. To top things off, the preamp can switch progressive-scan and high-definition video signals. It controls up to three zones and is software-upgradable. Price: \$3,199. 905-828-4575, www.sonicfrontiers.com



NOTE All prices and product information are supplied by the manufacturers. Dealer prices may vary.

new products



Sharp

A 27-inch TV, a DVD player, and a hi-fi VCR — they're all in this together, "this" being Sharp's 27DV-S100 combination A/V appliance. The TV has a flat picture tube, a component-video input, and a three-line digital comb filter. DVDs, CDs, CD-Rs, CD-RWs, and discs with MP3 files are all playable in the DVD player. The four-head VCR features a 400x rewind speed and a built-in head cleaner. No problems with taping a TV show while watching a DVD, and the supplied universal remote control manages the whole shebang. The set has a silver finish. Price: \$1,100. 800-237-4277, www.sharp-usa.com

Phase Technology

Standing tall in Phase Technology's Premier Collection is the PC-9.1 tower speaker. The 1-inch soft-dome tweeter can be swiveled on its axis and is coupled with a 1½-inch midrange driver within an antidiiffraction mount. Three 6-inch Kevlar-laminated woofers take on the lows. The speaker's rated frequency response is 32 Hz to 22 kHz ±3 dB, sensitivity 92 dB. The cabinet is finished in real wood veneer (natural cherry, honey oak, and black ash are available) and measures 8 x 45 x 14 inches, excluding the base. Each speaker weighs 84 pounds and comes with carpet spikes. Price: \$2,000 a pair. 888-742-7385, www.phasetech.com



Philips

With its recorder tray, three-disc carousel changer, and MP3-playback capability, the Philips CDR820 could be the only CD component you'll ever need. Recordings can be made at up to 4x speed, and the deck can make bit-accurate copies from its coaxial and optical digital audio inputs (there's also one output of each flavor). Digital and analog record-level controls allow you to make even-sounding music compilation discs, and the headphone jack has a level control, too. The recorder will automatically mark new tracks, but you can also do it manually, and there's an input for a computer keyboard, which makes it easier to enter artist names and song titles. It also has an RS-232 port. Price: \$499. 800-531-0039, www.philipsusa.com



Linn

The Linn 5125 multichannel power amplifier is rated to deliver 125 watts to each of five channels into 8-ohm loads. The amp features what the company calls Class V circuitry, which incorporates fast switch-mode power supplies and digitally controlled signal processing. Available in black or silver finish, the Linn 5125 weighs 13½ pounds and measures 15 x 3 x 14 inches. Price: \$2,750. 888-671-5466, www.linn.co.uk



©2001 Pioneer North America, Inc.

"No waiting in line.
No soggy popcorn.
No sitting behind some
guy who's six foot six.

Other than that, it's just
like going to the theater."

PureVision™ Plasma Going to the movies isn't what it used to be. Especially now that you can have a big-screen experience at home. Our 50-inch PureVision Plasma monitor produces stunning high-definition images, and its unique PureCinema™ technology creates the richest, most filmlike reproduction of DVD movies possible. What's more, the PureVision Plasma is an unbelievably svelte four inches deep. Which means it has a minimal impact on your living room. Until you turn it on of course.



SEARCH



WATCH



RECORD



EDIT



PLAY

new products



Polk Audio

The RM6000 speaker system from Polk Audio is home theater that won't break the bank — or your back. The total system weight is 38 pounds, including the 11½ x 13 x 13½-inch vented subwoofer. The wall-mountable satellites have 3-inch midrange drivers (two in the center speaker) and ½-inch silk-dome tweeters. The subwoofer has an 8-inch driver, and its amplifier is rated to deliver 50 watts of continuous average power from 40 to 180 Hz with less than 1% THD. Overall system frequency response is rated as 40 Hz to 19 kHz –3 dB. All components are magnetically shielded and come in either black or titanium finish. Price: \$550. 800-377-7655, www.polkaudio.com



Memorex

With its second generation of DVD recording media, Memorex provides discs in the DVD-R and DVD-RAM formats. Write-once DVD-Rs (\$20) can hold up to 4.7 gigabytes (GB) of data, which is enough for 1 to 2 hours of standard MPEG-2 video. The DVD-Rs are said to be compatible with most new DVD players and newer DVD-R computer drives. The rewritable DVD-RAM discs come in single-sided (\$35) and double-sided (\$40) flavors. RAM discs come in cartridges, but the single-sided disc can be removed for use in players that don't accept cartridges. 562-906-2800, www.memorex.com

SIM2 Sèl eco

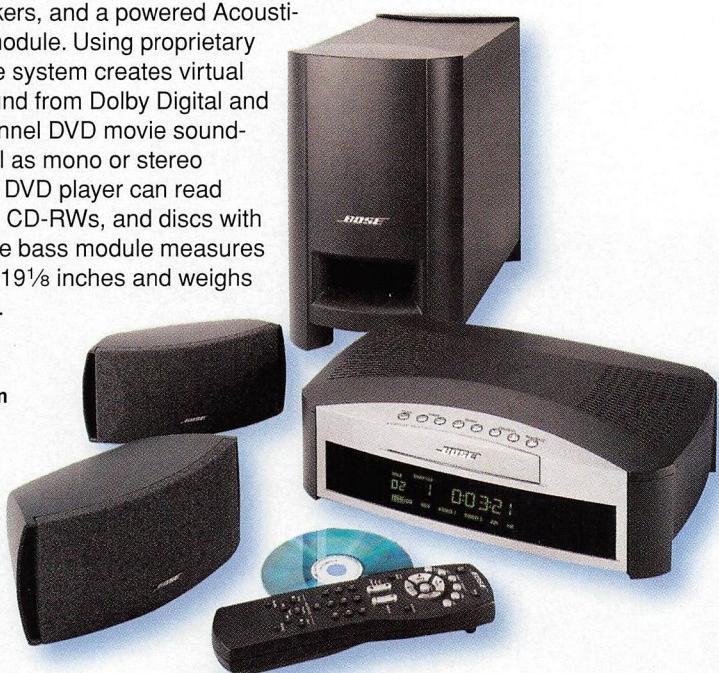
Texas Instruments' Digital Light Processing (DLP) technology is the feature presentation of SIM2 Sèl eco's HT200DM video projector. It uses a single DLP chip to project 16:9 images at 848 x 480 pixels or 4:3 images at 800 x 600 pixels. The projector's color wheel has six colors — up from the usual three — which is said to reduce color-separation artifacts. Other attractions include a built-in proprietary video scaler, three color-temperature presets, and a contrast ratio of 600:1. Video inputs include composite- and S-video, VGA, and RGB+H/V. The HT200DM weighs only 11 pounds. Price: \$10,995. 954-442-2999, www.sim2selecousa.com



Bose

Home theater systems tend to have a way of taking over a room, but the Bose 3-2-1 DVD home entertainment system aims to give you surround sound without being obtrusive. The system comprises a control center that combines a DVD player and receiver, an infrared remote control, two vented speakers, and a powered Acoustimass bass module. Using proprietary decoding, the system creates virtual surround sound from Dolby Digital and DTS 5.1-channel DVD movie soundtracks as well as mono or stereo sources. The DVD player can read CDs, CD-Rs, CD-RWs, and discs with MP3 files. The bass module measures 8¾ x 14½ x 19½ inches and weighs 23¾ pounds.

Price: \$999.
800-444-2673,
www.bose.com





"I don't want this
to happen to
my home movies."

DVD-R/RW Memories fade. Memories saved on DVD, however, do not. And now you can actually create your own DVDs, thanks to the new Pioneer DVD recorder. Stop worrying about the deterioration of all those video tapes you've got sitting in a box somewhere and simply record them onto DVDs. The DVD-RW even has built-in editing capability, which allows you to delete or rearrange scenes and add titles. So your DVD of "Sam's First Birthday" can look quite professional. Plus, since your creations will play on most standard DVD players, you can send copies to friends and family. Most importantly, when you sit back to watch your old home movies fifty years from now, they won't look old at all.



SEARCH



WATCH



RECORD



EDIT



PLAY



Q&A IAN G. MASTERS

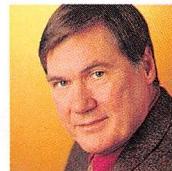
Aspect Confusion

Q. Can you explain to me how a 16:9 aspect ratio is any wider than 4:3? To me, 16:9 just means a bigger screen, not a different aspect ratio. The last time I checked, the lowest common denominator of 16:9 was 4:3. When I do a calculation of actual measurements for "16:9" aspect ratio TVs given by manufacturers, the ratio is closer to 16:6. Can you clear this up for me?

Edward A. Ludwig
Stroudsburg, PA

A. You can't reduce $\frac{16}{9}$ to $\frac{4}{3}$ because there's no whole number greater than one by which you can divide both the numerator (16) and the denominator (9). But it is easier to see the difference in the shapes if, like the film industry, you express 16:9 and 4:3 as 1.78:1 and 1.33:1, respectively. The 1.78:1 format is obviously wider. Looked at another way, a 16-inch-wide 16:9 movie will be 9 inches high, while

Expert advice on everything about home theater, audio, and video.



a 16-inch-wide 4:3 movie will be 12 inches high. These are clearly different shapes. As for imprecise numbers on manufacturers' spec sheets — what else is new?

DVD's Spin Cycle

Q. I just bought my first DVD player, and the manual says not to use lens-cleaning discs because they may cause the player to malfunction. While I don't need to clean my player now, I might need to later. Are cleaning discs safe?

Vincent E. Williamson
Orlando, FL

A. While I haven't heard any horror stories about them, it is conceivable that the little brushes attached to cleaning discs might damage an unusually fragile laser/lens system. Instead of cleaning discs, try using one of those compressed-gas cans that are designed for blowing dust off camera lenses.

It Burns!

Q. Last year I purchased a widescreen (16:9) digital rear-projection TV and a progressive-scan DVD player. I'm very

pleased with the picture quality, but the TV's manual contains very stern warnings about avoiding "burn in" and not allowing fixed images (even plain black bars!) to remain on the screen for more than 15% of the time the set is turned on. I understand that high-definition broadcasts are 1.85:1, which seems to be the best fit on my screen, but given the number of widescreen 2.35:1 transfers on DVDs, am I doomed to early ruin of my set?

Dale Snyder
Deltona, FL

A. High-definition images are actually 1.78:1, which fits your 16:9 set perfectly (do the math). A common movie ratio, 1.85:1, comes awfully close, and many sets let you blow it up a bit to fill the screen vertically. That cuts off a tiny bit of the edges but prevents burn-in. For other aspect ratios — including the 4:3 ratio for traditional NTSC TV — there will be horizontal or vertical bars unless you use the TV's various zoom or expand features to get rid of them. But in doing so you may have to choose between losing a significant part of the image or distorting its shape. This is a genuine problem for all tube-based sets, as well as plasma displays, if they're used a lot, you watch a lot of letterboxed material, and the contrast is set too high. So turn the set off when you're not watching, turn the contrast down from the default setting, and use letterboxing only when necessary to preserve the integrity of the image.

Class Struggle

Q. I often see amplifiers described as being of such and such a "class," like Class A or Class H. What do the different classes mean, and how might they affect an amp's performance and sound?

Jim Wisniewski

Eden Prairie, MN

A. Many such "classes" are proprietary tags given by amplifier manufacturers to whatever distinctive wrinkles their equipment incorporates. Class D, for example, is sometimes used to describe digital switching amps, which are showing up in more subwoofers these days because of their high efficiency and low-heat operation. But since Classes A, B, and AB designs are the most common, I'll focus on those.

Amplifiers use devices — transistors or tubes — that pass electrons in only one di-

Definitive Technology®

The Leader in High-Performance Loudspeakers

Authorized Dealers

- AK- Alaska A/V: Juneau• Shimek's Audio: Anchorage.
- AL- Cohen's Electronics: Montgomery• Hooper's: Birmingham• Kincaid's TV: Tuscaloosa.
- AR- Custom Audio Video: Little Rock.
- AZ- Jerry's Audio Video: Phoenix, Scottsdale• The Specialists: Tucson• Ultimate Electronics: Phoenix Metro Area.
- CA- Access to Music: Larkspur• Accurate A/V: S. Lake Tahoe• Ahead Stereo: Los Angeles• Audi Concept: Long Beach, San Gabriel• Audio Video City: San Luis Obispo, Santa Maria• Bay Area Audio: San Jose• Boots Camera: Fresno• Century TV: Garden Grove• CH Automation & Theater: West LA• Convoy A/V: San Diego• Creative Stereo: Santa Barbara• David Rutledge Audio: Palm Desert• Digital Ear: Justin• Discount Sales: Ontario• Magnolia HiFi: Santa Clara, San Ramon• Paradyme: Sacramento• Performance Audio: San Francisco• Shelley's Stereo Video: Woodland Hills• Systems Design: Redondo Beach.
- CO- Soundtrack: Denver & Suburbs, Boulder, Ft. Collins, Colorado Springs• Advantage Sight & Sound: Montrose• Pro Home Systems: Grand Junction.
- CT- Audio Etc: Orange Carstons Stereo/Video: Danbury• Roberts Audio Video: New London• The Sound Room: Westport• Stereo Shop: Hartford, DC & Washington Suburbs: Myer-Emco.
- DE- Hi-Fi House: Wilmington.
- FL- Absolut Sound: Winter Park• Audio Center: Deerfield Beach• The Audiophile: Vero Beach• A/V in Paradise: Key West• Bob's TV: Ocala area• Cooper for Stereo: Clearwater• Hoyt Stereo: Jacksonville• Sound Components: Coral Gables• Sound Ideas: Gainesville• Sound Insights: Ft. Pierce• Sound Waves: Lakeland• Stereotypes: Daytona Beach.
- GA- Georgia Home Theater: Atlanta• Audio Warehouse: Savannah• Evolution Home Theater: Atlanta• Ken's Stereo: Macon• Merit TV: Columbus• Stereo Connections: Valdosta• Stereo Shop: Martinez.
- HI- Honolulu Home Theater: Honolulu.
- IA- Ultimate Electronics: Cedar Rapids, Davenport, Des Moines• Archer Audio Video: Ft. Dodge• Audio Video Logic: Des Moines• Audio Visions: Sioux City• Hawkeye Audio: Iowa City, Cedar Falls• Renier's: Dubuque• Sound World: Mason City.
- ID- Ultimate Electronics: Boise.
- IL- Barrets Home Theater: Bloomington, IL, Dundee, Aurora• Good Vibes: Bloomington, Champaign• Jon's Home Ctr: Quincy• Music in Motion: Chicago Heights & Crestwood• Sound Forum: Crystal Lake• State Line Satellite: Rockford• Sterling Electronics: Sterling• Sundown A/V: Springfield• The Shoppe: Bradley.
- IN- Classic Stereo: Ft. Wayne• Mishawaka• Kings Great Buys: Evansville• Ovation Audio: Clarksville, Indianapolis, Lafayette.
- KS- Accent Sound: Overland Park• Advance Audio: Wichita• Audio Junction: Manhattan.
- KY- King's Great Buys: Overland Park• Ovation Audio: Lexington, Louisville.
- LA- Absolute Audio Video: Lafayette• Alterman Audio: Metairie• Home Theater Concepts: Slidell• Mike's Audio: Baton Rouge• Wright's Sound Gallery: Shreveport.
- MA- Cameras Inc.: Arlington (Boston)• Nantucket Sound: Hyannis• Percy's: Worcester• Pittsfield Radio: Pittsfield.
- MD- Gramophone: Baltimore, Columbia• Myer-Emco: Frederick, Gaithersburg, Beltsville, Rockville• Soundscape: Baltimore.
- ME- New England HiFi: Scarborough.
- MI- Contemporary Audio: Okemos• Pecar's: Detroit/Troy• Classical Jazz Holland• Court St. Listening Room: Saginaw• Home Entertainment Store: Kalamazoo• Paragon Sound: Ann Arbor• Superior Sound: Grand Rapids• Today's Audio: Flint.
- MN- Audio King: Minneapolis & Suburbs, Rochester, St. Cloud• Audio Designs: Winona.
- MO- Independence A/V: Independence• Sound Central: St. Louis• Ideal Acoustics: Starkville• McLellan TV: Hattiesburg.
- Players A/V: Ridgeland.
- MT- Rocky Mt. Hi Fi: Great Falls• Vann's Inc.: Missoula, Helena, Bozeman, Hamilton, Kalispell, Billings, Butte.
- NC- Audio Unlimited: Jonesville• Audio Visions: Wilmington• Now Audio Video: Durham, Greensboro, Raleigh, Winston Salem• Sound Systems: Charlotte, Fayetteville• Tri City Electronics: Conover.
- NE- Custom Electronics: Omaha, Lincoln.
- NH- State Street Disc.: Portsmouth.
- NJ- 6th Avenue Electronics: Springfield, Livingston, East Brunswick, Woodbridge, Paramus, West Long Branch, West Paterson• Camera and TV Stop: Medford• Monmouth Stereo: Shrewsbury• Woodbridge Stereo: West Caldwell, Woodbridge.
- NM- Ultimate Elect.: Albuquerque• Sound Ideas: Albuquerque.
- NV- Ultimate Elect.: Las Vegas.
- NY- Audio Breakthrough: Manhasset• Audio Den: Lake Grove• Clark Music: Albany, Syracuse• Stereo Exchange: Manhattan• Hart Elect.: Vestal• Listening Room: Scarsdale• Media Room: Mt. Kisco• Park Ave. Audio: Manhattan• Rowe Camera: Rochester• Speaker Shop: Amherst.
- OH- Absolute Theater: Powell• Auto Arts: Youngstown• Audio Craft: Akron, Cleveland, Mayfield Hts., Westlake• Audio Etc.: Dayton• Belden Audio: Canton• Classic Stereo: Lima• Ohio Valley Audio: Cincinnati• Stereo Visions: Columbus• Threshold Audio: Heath• Unique Home System: Cincinnati.
- OK- Ultimate Electronics: Oklahoma City, Tulsa.
- OR- Bradford's Home Ent.: Eugene• Kelly's Home Ctr: Salem• Magnolia HiFi: (Portland) Beaverton, Clackamas, Tigard.
- PA- Audio Junction: Pittsburgh• Audia Lab: Fairless Hills• Ed's TV: Hatfield• Gary's Elec.: State College• Hart Elec.: Blakely• Hi-Fi House: Abington, Broomall• Listening Post: Pittsburgh• Palmer Audio: Allentown• Stereo Shoppe: Seltzgrove, Williamsport• StereoLand: Natrona Heights• Studio One: Erie• The StereoShop: Greensburg.
- RJ- Stereo Discount Ctr.: Providence.
- SC- Custom Theater & Audio: Myrtle Beach• Upstairs Audio: Columbia.
- SD- Audio King: Sioux Falls• Sound Pro: Rapid City.
- TN- College HiFi: Chattanooga• Good Vibrations: Cookeville• Hi-Fi Buys: Nashville• Now Audio Video: Knoxville• Modern Music: Memphis• Sound Room: Johnson City.
- TX- Audio Video: College Station• Bunkley's Sound Systems: Abilene• Bjorn's: San Antonio• High Fidelity: Austin• Home Theater Store: Arlington, Austin, Houston, Dallas• Krystal Clear: Dallas• Marvin Electronics: Ft. Worth• Matt Panter Sat. & TV: Waco• Mike Massey, Inc.: Odessa• Sound Quest: El Paso.
- UT- Crazy Bob's: St. George, Cedar City• Ultimate Elect.: Layton, Murray, Orem, Salt Lake City.
- VA- Myer-Emco: Falls Church, Tyson's Corner, Fairfax• Audio Connection: Virginia Beach• Audiotechnics: Roanoke• Home Media Store: Richmond.
- WA- Bunch-Finnegan TV: Kennewick• Magnolia HiFi: Seattle & Suburbs, Tacoma, Silverdale, Spokane• Pacific Sight & Sound: Wenatchee.
- WI- Flanner's A/V: Milwaukee• Hi-Fi Heaven: Green Bay• Sound World: Wausau• Team Electronics: Manitowoc.
- Puerto Rico- Precision Audio: San Juan.
- Canada- Absolute Electronics: Winnipeg• Air Waves Radio & TV: Moosejaw, SK• Audio Express: Saskatoon, SK• Bay Bloor Radio: Toronto.
- Canadian Sound: Brampton, Ont. • Digital Dynamics: Abbotsford, B.C. • Environment Electronique: Westmount, Que. • K&W Audio: Calgary.
- Kebecom: Montreal• Lipson's Elec.: Newmarket, Ont. • Sound Station: Courtenay, B.C. • Stereo Plus: Ottawa, Ont. • StereoLand: Windsor, Ont.
- Mexico- Contact Grupo Volumen: Mexico City.

Definitive's ProCinemas® Deliver “Monstrous Sound From Tiny Speakers”

—Joe Hageman, *Home Theater Magazine*

“Truly incredible speakers at an unbelievable price!”

—Jeff Cherun, *Home Theater Magazine*

“A new standard for sub/sat systems” —*Home Theater*

Now you can get Definitive's high-end leading-edge technology and world-class sound quality at an incredibly affordable price. Beginning at only \$575 (for the 3-piece Pro 80.3 system) all our highly-acclaimed ProCinema® sub/sat systems are elegantly styled, remarkably compact and will deliver absolutely state-of-the-art performance for stunning music and movie perfection. They are clearly your number one choice for unmatched quality and value.

“They sound like monster towers” —*Home Theater*

With their awesome 250 watt-powered 8", 10" or 12" subwoofers, non-resonant NROC™ curved PolyStone™ cabinets, high-definition diecast-basket drivers and precision Linkwitz-Riley crossover networks, Definitive ProCinema systems will make performances really come alive in your room and literally put you right in the concert hall or into the movie itself. They are, as *Time Magazine* raves, “phenomenal.” Hear them at a Definitive dealer today!



ProCinema 100.6 System \$1349



ProCinema 80.6 System \$999



ProCinema 200.6 System \$1746



Definitive Technology®

The Leader in High-Performance Loudspeakers

41433 Cronridge Dr. • Owings Mills, MD 21117 • (410) 363-7148

www.definitivetech.com

See our dealer list on page 38

Q&A

rection, but an audio signal is a wave that's sometimes positive and sometimes negative, constantly passing through the zero-voltage point. One way for an amplifier to deal with that is to convert a positive-to-negative transition to a positive-to-more-positive transition, where the maximum "negative" excursion is just above zero voltage and the crossover point is at half power. This is Class A operation, and many audio purists believe it offers the least signal degradation — but with the output devices always on, heat can build up quickly.

Class B splits the audio signal into its positive and negative components, amplifying them separately and then combining the outputs to recreate the full signal. The devices are on only half the time, so they run much cooler and can develop more power for their capacity than in Class A operation. But the transition from one device to the other can result in audible crossover distortion. The common solution is Class AB, in which each device amplifies slightly more than half the signal so that their outputs overlap for a short time, reducing or eliminating crossover distortion.

Too Few Connections

Q. My receiver has a tape/MiniDisc connection that allows me to use only one of these components at a time. Is there some way I can play and record both devices on the same connection?

Brian Covill

Hamilton, Ontario

A. You have a number of options, but they all might involve some compromises. For instance, although your receiver has only a single audio tape-monitor loop, if it's an A/V receiver, it probably has one or two similar loops for video recorders. You can use one of these for an audio device — just don't plug anything into the video jacks. This arrangement might not let you dub from one deck to the other, depending on the receiver, or it might allow dubbing in only one direction — MD to tape, say, but not the other way around — so you'll have to experiment.

Another alternative is to attach both recorders to the single audio loop in series. For instance, you could attach the receiver's tape-out jacks to the cassette deck's inputs, the deck's outputs to the MD inputs, and the MD recorder's outputs to the re-

ceiver's tape-in jacks. This would let you feed a signal from the receiver directly to the tape deck and, by placing the deck in record mode (or "source," if it's a three-head unit), you could send it through to the MD recorder. With that in record mode, you could either play a tape through it or dub the tape to MD. The only thing you couldn't do is dub MD to tape.

This arrangement would be awkward, however, and would necessitate passing the signal through so many extra circuits that it might be degraded. Give it a try, but if it's noisy or distorted, look into an external switching box.

S&V

Have a question about audio, video, or home theater? Send e-mail to soundandvision@hfmmag.com (put "Q&A" in the subject line) or regular mail to Q&A, Sound & Vision, 1633 Broadway, New York, NY 10019. Please include your name, street address, and phone number; only your name, city, and state/country will be printed. Sorry, but only questions chosen for publication can be answered, and all letters are subject to editing.

Order AllaCard™

You can now have your own video processor custom built to seamlessly perform all the video switching, format conversions, and video enhancement required for today's high performance home theater systems. The VX2's modular design accepts slide-in printed circuit boards (cards), one for each video input, output or control function. You can control up to 8 video inputs (16, if 2 VX2's are used) and up to 11 outputs (21, if 2 VX2's are used). Input cards can be selected as composite/S-video, component video or VGA output cards can be selected as composite, S-video/component, RGBHV, and VGA. A line doubler and line quadrupler will soon be available. In development are a video scaler and a IEEE 1394 I/O card.



For your local dealer
visit our website at
tributariescable.com

Or call us for
your nearest Dealer at
800.521.1596
407.855.0497



TRIBUTARIES®
"Bringing It All Together"

Gordon J. Gow Technologies, Inc. Orlando, Florida USA 32824

TRIBUTARIES®
VX2

*Just
Very
Cool*



destination: Digital

YOU HAVE ARRIVED. Far out. Beyond technology that spans space and time, there's still something more. The whole is greater than the sum of its parts. As a DVD player, JVC's XV-FA95 is a portal to sights yet

unseen. As a CD player or DVD audio player, a passport to sound scapes only imagined. And with new seven disc loading technology - this is an experience that could go on forever.

Great Free* Offers with Purchase of Your JVC DVD Player.



Buy any JVC DVD Player and select the special edition DVD of either "Total Recall" or "Basic Instinct" from Artisan Home Entertainment for free.*



Buy any JVC DVD Player with DVD-Audio and receive a free sampler of DVD-Audio mixes from Warner Music.



Buy any JVC DVD Player with DVD-Audio and receive a free exclusive DVD-Audio mix of songs from Yes Magnification and House of Yes from Beyond Music.

JVC

Excite your senses.

www.jvc.com

* Offer requires payment of \$3.95 shipping and handling and purchase of qualifying JVC DVD Player. Limited time offer (10/01/01-12/31/01). See JVC retailer for complete details of offer. While supplies last. Packaging may vary.

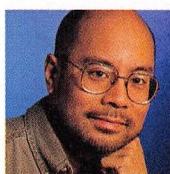
©2001 JVC Company of America. All Rights Reserved.

Black Is the Color...

Black may or may not be the color of your true love's hair, but it should be the only "color" your video display reproduces when it receives the signal for black. Trouble is, the video signal that means black varies from place to place (such as Japan and the U.S.) and, more important for **Sound & Vision** readers, from DVD player to DVD player and from TV to TV. The upshot: interactions between a DVD player's output and what your display is expecting can significantly degrade picture quality.

Detail-oriented readers of the lab data in our DVD player test reports will have noticed that there's always an entry for "setup level." That's the voltage, measured in IRE units (1 IRE = $\frac{1}{140}$ volt), the player sends

The "brightness" control actually adjusts what happens in the darkest portions of an image.



to its composite- or S-video output when it decodes the data for black on a DVD. Players generally produce either the U.S. standard +7.5 IRE or the Japanese standard 0 IRE when reproducing black (full white is 100 IRE). Some players have a black-level "enhancement" control in their setup menus that can switch between +7.5 IRE, variously designated "high" or "normal," and 0 IRE, designated "low" or "enhanced." (There are also other, more confusing designations out there, such as "on" and "off.") So far so good, more or less.

The video-signal IRE level at which a CRT-based TV "decides" to produce black is adjustable, either in the factory or at home, by the black-level control. As is typical for video terminology, which is full of misnomers, this is commonly called a "brightness" control even though it actually adjusts what happens in the *darkest* portions of an image. (Another video misnomer pertains to color-temperature settings, where what's called "warm" always measures *lower*, in kelvins, than what's

called "cool.") Some monitors come out-of-the-box set for black at +7.5 IRE, some at 0 IRE, and a few, mostly from smaller, little-known brands, at some other value no one knows until it's tested in a lab.

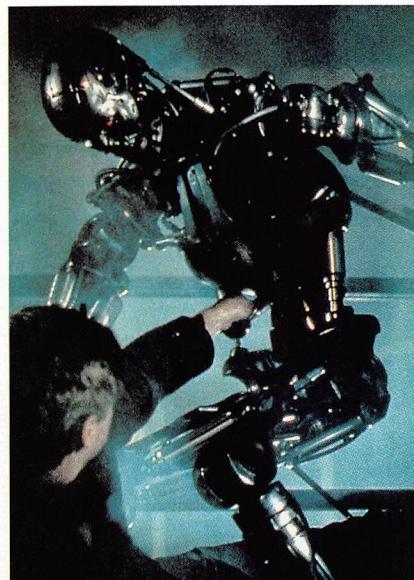
With any given DVD player and TV, four combinations are theoretically possible. And since both your DVD player and your TV should be on the same page when it comes to black level, only two of these combinations are correct, meaning that they'll let you see the full dynamic range of the video signal: **1) DVD player and TV are both set up for +7.5 IRE; and 2) DVD player and TV are both set up for 0 IRE.**

The other two combinations will reduce picture quality in different ways: If you have combination **3) DVD player set up for +7.5 IRE and TV for 0 IRE**, the display will misinterpret the player's black signals as dark gray. You'll never get true blacks, and the picture will lose richness and depth. If you have combination **4) DVD player set up for 0 IRE and TV for +7.5 IRE**, your display will show full black when the player is sending signals that are supposed to be reproduced as very dark gray. The picture may initially seem to have "enhanced" contrast, but eventually you'll notice that the dark areas of the image are *too* dark. Details and subtleties in the shadows will be pushed down into black.

Fortunately, both of these nonideal situations can be remedied once you've diagnosed the problem. There are two approaches, one very simple, the other a bit more complicated but guaranteed to produce the best results.

Simple first: If your player has a black-level "enhancement" switch, flip it between the enhanced and normal positions while paying close attention to the details in the shadowy areas of images from DVDs. (It may take a while to find the right scenes for this, but that can be fun, too.) Only one of the positions will produce an accurate picture in which you can see *both* the darkest details and true black (in very deep shadows, for example).

But the very best way to get the black level right is to adjust your TV using artifi-



Terminator 2 contains deep blacks and shadow details that can be lost if your TV's black level is not set up correctly.

cial deep shadows in the form of a black-level test pattern. Suitable test patterns and instructions for their use are found both on Ovation Software's *Avia* test DVD and as a "free" bonus on certain THX-mastered DVDs (like *Cape Fear*, *Akira*, and *Terminator 2: Judgment Day*) that contain the THX Optimizer or Optimode suites of test patterns. The adjustment is very simple and involves leaving the DVD player's black-level control in either position and manipulating only your TV's black-level ("brightness") control.

Note that component-video outputs from DVD players and component inputs on TVs and monitors are all *supposed* to operate with a 0-IRE setting for black level (but many don't). Regardless of the DVD hook-up used, there may be noticeable changes in black level when you switch among video sources. It will be hard to compensate for these changes unless your TV lets you save different picture settings for each input, which makes this a desirable feature for just that reason.

Also, perception of black is greatly influenced by viewing conditions. In particular, light bouncing onto the screen from the room may be so intense that it will mask the subtle shadings on the display and what you perceive as black may not actually be at the TV's black point. This is one of the reasons you need to reduce ambient light during critical viewing and, of course, during black-level adjustment. True video-philes are always in the dark.

New Acoustimass® module.

Slips behind furniture so you won't even see it. Improved technology delivers more impactful bass that seems to come from the tiny cube speakers.

Award winning Jewel Cube® speakers.

Reflect sound off your walls to create an exceptionally wide soundstage, much like a movie theater.

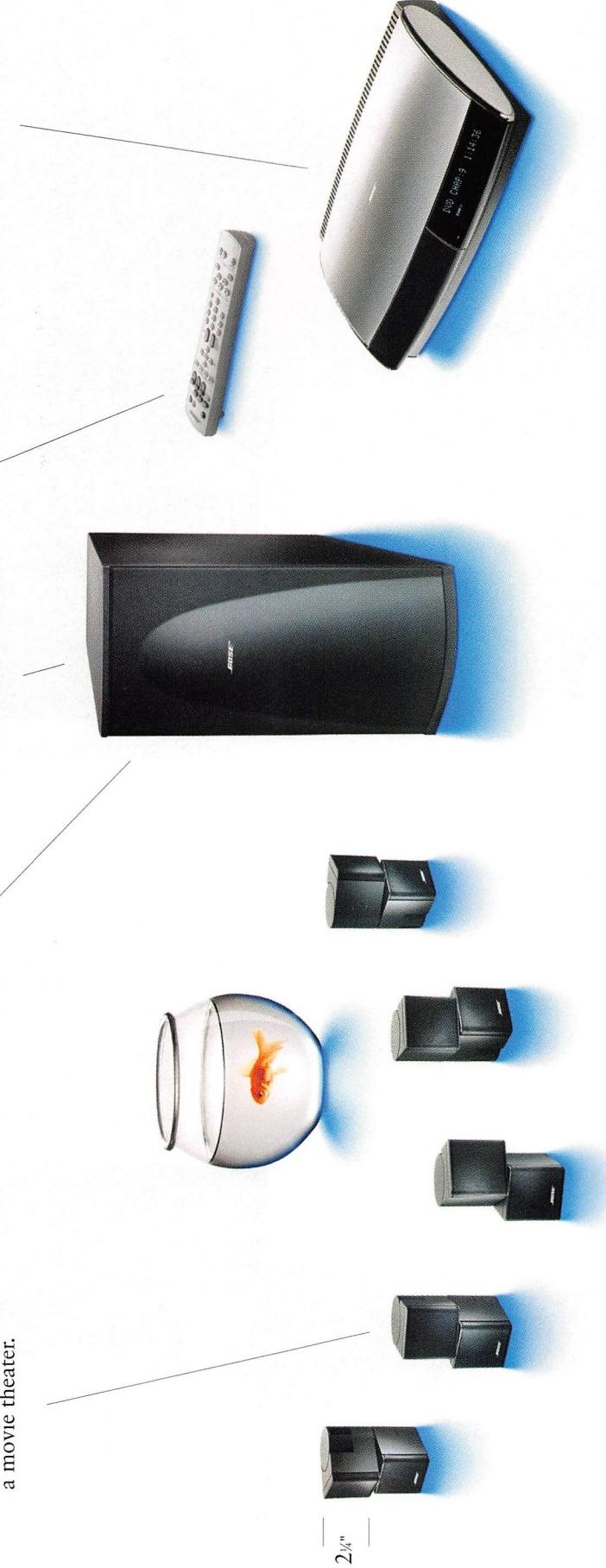
New A/V remote.

Also controls TV, VCR, cable box and satellite receiver, even works through walls from another room.

New media center.

Plays DVDs, CDs, AM/FM and other audio and video formats, including MP3 CDs, CD-R and CD-RW.

Hides out of view.



New. Different. Better.

Introducing the next-generation Lifestyle® home entertainment systems.

Hear what's new, different and better in surround sound from Bose®, the most respected name in sound. For a FREE information kit, names of dealers and our own Bose stores near you, call: **1-800-ASK BOSE**. Ask for Ext. D01. Learn more at ask.bose.com/wd01



anyone can watch a movie...

with NAD...
you experience it.

what **sounds** like more fun?

NAD has built an enviable reputation on sound quality. It has always been our company's philosophy, it's who we are. Take the T751 Surround Sound Receiver and the T531 DVD/CD Player—each built with the knowledge that in an entertainment system, it's the *sound* that creates the reality. You will discover an involvement with your favorite movies and music you never thought possible.

NAD - performance, value, simplicity.



NAD T531 DVD/CD Player - Built-in MP-3 decoder, Coaxial and Optical digital outputs, Component, S-Video and Composite video outputs, 24 bit/96 kHz compatible, and remote control.

NAD T751 Surround Sound Receiver - 60 watts into 8 ohms (all 5 channels simultaneously), Crystal DSP processor, Dolby Digital®, DTS and Pro Logic decoding, E.A.R.S. (Enhanced Ambience Recovery System), Impedance Sensing Circuit (ISC) topology, remote control with NAD Link.

NAD Electronics of America, 6 Merchant Street, Sharon, MA 02067 800.263.4641
Dolby Digital and Dolby Pro Logic are trademarks of Dolby Laboratories Licensing Corporation. DTS is a registered trademark of Digital Theater Systems, Inc.

NAD

www.NADElectronics.com

My Moral Dilemma

The Eighth Commandment (or the Seventh in some versions) teaches, "Thou shalt not steal." I think most people would agree with that. Frankly, with all due respect to Moses, this is a no-brainer; we know it's not right to take something that doesn't belong to us. If I steal a physical thing like a CD, that's wrong. Similarly if I steal an intangible thing, like copyrighted music in the form of data on a CD — that's wrong, too.

The Bible and other great books also tell us that beauty is a rare and wonderful thing. Psalms 50:2.7 teaches, "Out of Zion, the perfection of beauty, God shines forth."

Clearly, perfection and beauty are things a

moral person must respect. My dilemma is trying to decide which is the greater sin — theft, or the destruction of beauty.

A lot of things are stolen each year, and apparently music is high on the list. The International Federation of the Phonograph Industry (IFPI) estimates that 640 million pirate CDs were sold in 2000, up 25% from the year before — a figure that doesn't include MP3

files traded over the Internet. The IFPI considers the Internet to be a virtually 100% pirated medium and estimates that 35% of all discs and tapes sold are pirated. Illegal sales of music outnumber legal sales in 21 countries, largely because of cheap duplicates burned onto CD-Rs.

The bottom line: the pirated-music business, much of it run by organized crime, racked up \$4.2 billion last year, according to the IFPI. While the record labels and their interest groups probably inflate the figures somewhat (though fibbing runs afoul of the Ninth, or Eighth, Commandment), the scope of music piracy on a worldwide basis is still alarming.

The music industry is taking steps to

protect its property. Last year, 20 pirate CD lines were shut down, and 27 more bit the dust in the first few months of this year — taking an annual production capacity of 100 million discs off line. And beyond the Napster headlines, industry enforcers took down 15,000 Web sites holding some 300,000 copyrighted music files.

Another way to prevent theft is to protect the property itself. You can't make a usable copy of most VHS tapes or DVDs because the signal has been processed with Macrovision to prevent copying altogether or to scramble playback of a copy. Record companies have found it difficult to prevent copying of music because CDs were designed to be easily readable on a wide range of hardware. On the other hand, numerous companies have developed ways to disrupt the process of ripping CDs into MP3 files or another compressed audio format without affecting their playability on regular CD players.

Among the most recent of such protection methods is Macrovision's SafeAudio system. Macrovision has been on the right side of the moral issue for many years, but what raises my hackles about SafeAudio is that it works by *degrading* the original music coding. Exactly how SafeAudio works is a secret, but it is based on techniques

originally developed by TTR Technologies, whose patents describe a way to alter the data on a CD glass master by introducing erroneous values in both the music data and the error-correction codes. Listeners may not be aware of the errors, because CD players can presumably bridge the gaps. The idea is that when someone tries to rip or copy a SafeAudio-protected disc, the errors embedded in the CD data will hang up the ripping software, so it can't complete the conversion, or yield a conventional copy so filled with uncorrectable errors that it's unlistenable on playback.

Macrovision claims it has improved the TTR technique and that in its own tests golden-eared listeners could not hear the effects of the processing. The company is also quick to point out that the first commercial CD using SafeAudio was released in California earlier this year and, so far, the copy-protection processing has not yielded any more complaints than usual.

My moral dilemma is this: I support measures to reduce piracy, but the approach employed by Macrovision's SafeAudio system is troubling. While I might support the use of a truly inaudible watermark or some other type of antipiracy processing that does not corrupt the music data, the idea of deliberately degrading recorded music by introducing errors into it is dead wrong. And there are practical reasons why SafeAudio should be criticized. For example, when BMG tried a similar antipiracy measure on a couple of CDs released in Germany last year, the company discovered that 3% of CD players couldn't play them, so they were recalled. I should also point out that almost any hacker should be able to think of several ways to overcome SafeAudio and make playable copies.

At best, SafeAudio is a speed bump that may prevent some nonprofessional theft. On the other hand, the practice of deliberately vandalizing music — a thing of beauty — is fundamentally wrong. It's a very frustrating moral dilemma, enough to make me start swearing, but I'd better bite my tongue — you know, the Third (or Second) Commandment.



I support measures to reduce music piracy, but the approach employed by Macrovision's SafeAudio system is troubling.

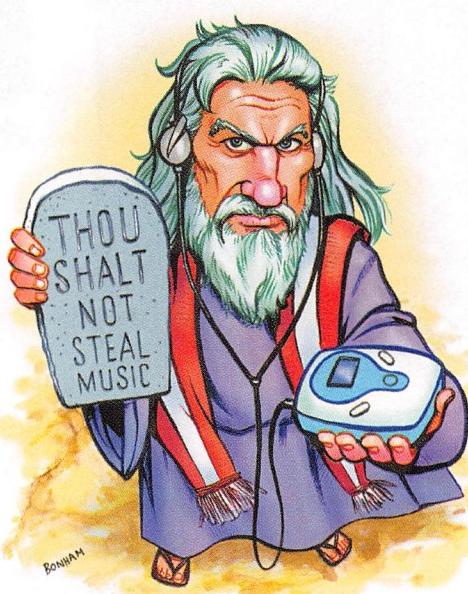


ILLUSTRATION BY STACEY BONHAM

"Selling Direct Allows Cambridge SoundWorks To Price Speakers Hundreds Of Dollars Below The Competition."

— Inc. magazine

Now – for a limited time – you can save an extra \$50...\$100...or \$200!*

Since 1988 Cambridge SoundWorks has been selling high-performance speakers and systems directly to the consumer. Our 45-Day Total Satisfaction Guarantee lets you audition your new system in the best possible showroom — your living room. There's no risk. If you aren't perfectly pleased with your purchase, we'll give you a full refund. We even pay return shipping.*

Audio magazine said we may have "the best value in the world." And now that value is even better — save \$50 to \$200 when you purchase between September 29 and November 21, 2001.*

Save \$50

On Purchases
Over \$350

Save \$100

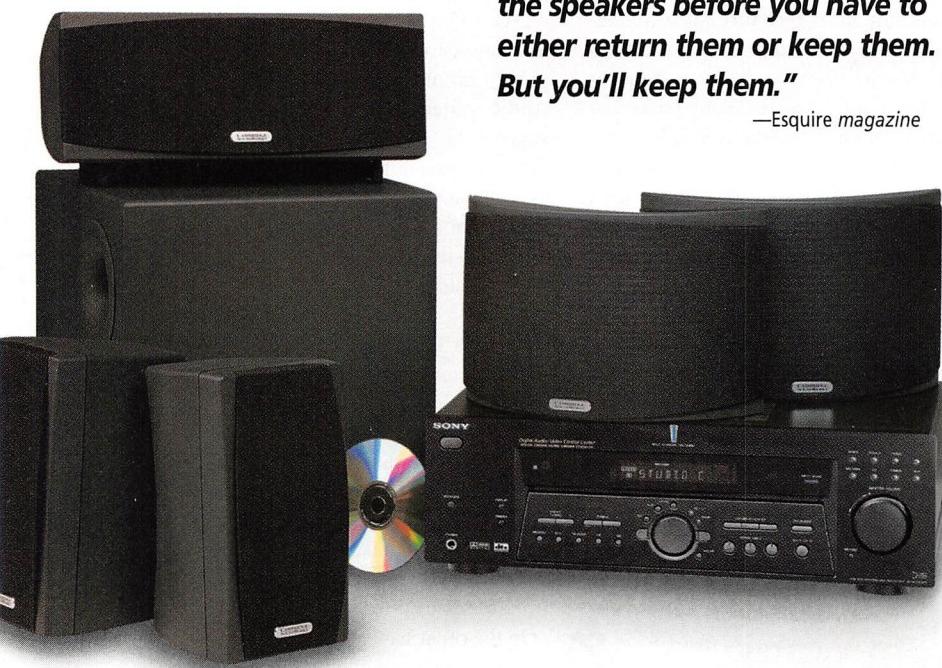
On Purchases
Over \$700

Save \$200

On Purchases
Over \$1,400

"You get a month to play with the speakers before you have to either return them or keep them. But you'll keep them."

—Esquire magazine



Our Best-Ever Dolby Digital®/DTS® Surround System Under \$1,000!

Newton Series™ MC300 center speaker; MC200 main speakers; S200 surround speakers; BassCube™ 8S powered subwoofer; Sony STRDE575 Dolby Digital receiver. Reg. \$1,249.94 **\$999.99**



MegaWorks™ 210D Ultra-High-Performance Amplified Speaker System

Simply the best. Turn your PC, TV, or portable player into an audiophile music system. 270-watt B.A.S.H® amplifier, 8" subwoofer **\$299.99**

No Interest. No Payments.

For 12 Months!

On Purchases of \$399 and up[†]

* Offer good from September 29 to November 21, 2001. Limit one discount per customer. Discount offer applies to most sale items, but does not apply to televisions, clearance items, previous sales or other discount code offers. In the event of a refund where the purchase price after refund is below the minimum purchase level, the discount amount will be deducted from the refund amount. Call 1-800-FOR-HIFI or log on to www.hifi.com for details.

** TVs 27" and larger are excluded from our Free Return Shipping offer.

† For qualified customers. For more information visit www.hifi.com or call 1-800-FOR-HIFI.

FREE CATALOG

CALL 1-800-FOR-HIFI



"Near perfection...a solid and precise stereo sound stage... superb bass... excellent value."

—Sound & Vision magazine



**MusicWorks™ 200 Micro Stereo System
With Powered Subwoofer**

"MusicWorks has depth and clarity I'd expect from a much larger audio system." —Sound & Vision
Reg. \$249.98 **\$199.98**



Model 88CD Table Radio by Henry Kloss®

Terrific sound. Built-in powered subwoofer. Blows the dials of the competition." —Dallas Morning News
\$349.99



**MicroWorks® Amplified Speaker System
With Powered Subwoofer**

Add great sound to your PC, TV, or anything with a headphone jack. PC magazine says, "The only speakers you'll ever need." Reg. \$249.99 **\$149.99**

Newton Theater™ MC300 – Our Best Subwoofer/Satellite Surround Speaker System.

High performance, high style main/center speakers; 3-mode MultiPole™ surround speakers and an awesome 1,000-watt dual 10" subwoofer. Shown with optional speaker stands. Reg. \$2,049.95 **\$1,899.95**

Call Toll-Free To Order:
1-800-FOR-HIFI
(1-800-367-4434)

C A M B R I D G E®
SOUNDWORKS

Visit our Cambridge SoundWorks stores in New England or the San Francisco Bay area

Buy Online At Our Web Site:
hifi.com™

the new take™ experience incomparable home theater

ENERGY®
SPEAKER SYSTEMS

The new Energy Take 5.2 is the latest evolution of Energy's 1996 release of the wildly popular Take 5 Home Theater System. Chosen as "Home Theater System Of The Year" three years running by Audio Video International magazine, Take 5 and the matching e:xl-S8 are a benchmark in affordable home theater.

Now Energy raises the standard with the new Take 5.2 system. Leveraging technological advancements from our flagship speaker, Energy has engineered the ultimate compact home theater with increased flexibility, improved lifestyle design and higher power handling.

The Take 5.2 and matching S8.2 subwoofer*, a perfect blend for incomparable home theater performance.

Visit your local authorized Energy dealer and experience the new performance standard in compact, affordable home theater today.

*S8.2 Subwoofer sold separately.

Energy Speaker Systems
3641 McNicoll Avenue,
Toronto, ON CANADA M1X 1G5
t: 416.321.1800
f: 416.321.1500
w: www.energy-speakers.com

Mitsubishi 46-inch HDTV Monitor



The transition to the country's new digital TV system has been so slow in its first three years that high-definition TV (HDTV) sometimes seems like an illusory ideal. But I knew that things were about to turn the corner when CBS began producing and airing its longest-running daytime soap opera, *The Young and the Restless*, in high definition. Now, I'm no fan of soaps — staring at wallpaper strikes me as more entertaining — but *this* I had to see. As luck would have it, Mitsubishi's WT-46809 HDTV monitor arrived just in time for my first screening of this daytime drama. More on that later.

Along with high-def soap, another indication of HDTV's mainstream ambitions is the sinking price of sets. The Mitsubishi

lists for \$2,499, which is pretty reasonable for a high-def-capable widescreen TV. It's a rear-projection design with a 46-inch (diagonal) screen that's big enough to render HDTV images with impressive clarity, but not so big that it will overpower an average room. Standing about 38 inches tall, the WT-46809 is a "tabletop" model designed to be placed on a low table or TV stand (a matching base with room for a couple of A/V components is available for \$319). It sports a graphite-gray finish.

The set has a protective screen shield that can be easily removed with a screwdriver and a bit of elbow grease. Centered directly below the screen is a row of control buttons that operate all of the TV's main functions in case you misplace the remote. The one marked A/V Reset changes

the audio and picture controls for each of the TV's nine inputs back to their default settings, so be careful not to hit it accidentally! There's also a front-panel A/V input with composite- and S-video jacks for easy camcorder hookups.

Mitsubishi certainly didn't scrimp on inputs when it designed the WT-46809. In addition to a DTV input with both wideband component-video and RGB+H/V connections, the rear panel provides two additional component-video inputs that handle both standard 480i (interlaced) and 480p (progressive-scan) signals. There are also three A/V inputs with composite- and S-video connections and an A/V monitor output.

The well-designed universal remote control can be programmed to operate four additional devices and is preprogrammed to control Mitsubishi components (a supplied reference sheet tells which buttons control what functions). Critical buttons — including those for volume adjustment and input and channel selection — can be backlit by pressing a button on the side of the hand-

fast facts

KEY FEATURES

- Widescreen display with selectable aspect ratios
- Displays 1080i-format HDTV programs from an outboard HDTV tuner
- Upconverts standard 480i signals to 480p or 960i
- Partially backlit universal remote control

INPUTS/OUTPUTS

front panel composite/S-video input with stereo audio

rear panel wideband component-video, two 480i/480p component-video, three composite/S-video inputs, all with stereo audio; two antenna inputs; speaker-level center-channel input; composite-video and fixed/variable-level stereo audio output; PIP audio output; antenna output

DIMENSIONS 42 $\frac{3}{4}$ inches wide, 38 $\frac{1}{4}$ inches high, 27 inches deep

WEIGHT 181 pounds

PRICE \$2,499

MANUFACTURER Mitsubishi Digital Electronics America, Dept. S&V, 9351 Jeronimo Rd., Irvine, CA 92618; www.mitsubishi-tv.com; 800-332-2119

test report

RX-V1 DIGITAL HOME THEATER RECEIVER



- Incredible sound quality
- Digital ToP-ART to maximize digital performance
- Tri- and Quad-Field CINEMA DSP
- Dolby® Digital/Matrix 6.1 and DTS 6.1 channel
- World's most powerful consumer-use audio LSIs
- Extensive A/V and custom installation capabilities
- SILENT CINEMA for private listening

DPX-1 DIGITAL CINEMA PROJECTOR



- DLP™ Technology to provide extraordinary resolution and contrast
- Innovative Tri-Color Wheel to optimize contrast for best movie viewing
- Extremely quiet operation through unique fan design
- Numerous inputs for compatibility
- Mirror Panel: 0.9 inch XGA DMD™ x 1
- Resolution: 1,024 x 768 pixels
- Brightness: 800 ANSI lumens
- Contrast Ratio: 900:1



YAMAHA

WHERE HOME THEATER LIVES™

WWW.YAMAHA.COM

DLP and DMD are trademarks of Texas Instruments, Inc.

set. My favorite remote feature is the Video button, which calls up a handy onscreen display of picture settings that you can adjust without having to dig through several layers of menus.

The set provides display modes for juggling images in a variety of aspect ratios. Standard mode is for widescreen (16:9) HDTV programs and anamorphic DVDs, which are specially mastered to deliver improved vertical resolution on 16:9 sets. In the case of non-anamorphic widescreen DVDs, you can use the Expand and Zoom modes to enlarge the image to fill the screen, usually removing the black letterbox bars at the top and bottom. Finally, the Narrow mode displays squarish 4:3 images in the center of the screen with gray bars on either side. All modes are available for both 480i and 480p signals, but when you tune into an HDTV program the set automatically locks into its Standard widescreen mode.

Mitsubishi has devised a user-friendly onscreen menu system that makes setup a snap. Using the input-assignment submenu, I relabeled the inputs to reflect the names of the DVD player and other components I had hooked up. Then I "deleted" any inputs that weren't being used, which saves time when you toggle through inputs with the remote. When I finally got around to converging the set's three cathode-ray tubes (CRTs), Mitsubishi's 64-point convergence system allowed me to key in a crisp alignment at both the center and edges of the screen. To see how good a job I did, I tuned into the graphics-heavy Bloomberg information channel and was pleased to find that its ubiquitous scrolling text was almost completely free of the blue and red fringing that you sometimes see on rear-projection TVs with limited convergence controls.

I was also glad to find that the audio and video settings for each of the inputs remained stored in memory after I tweaked them. This meant that my adjustments for the satellite receiver connected to the S-video input were unaffected by the settings I dialed

in for the progressive-scan DVD player connected to the component-video input. Also, the onscreen control sliders for parameters like tint, color, and contrast appeared at the bottom of the screen, allowing me the convenience of making picture adjustments while viewing the image in its entirety. The menus on some other sets occupy most of the screen area, making it hard to see the effect your adjustments have on picture quality.

After calibrating the WT-46809's picture settings with Ovation Software's Avia DVD, its picture was still very much on the bright side. Accessing the set's secret service menu (see "in the lab" for details) enabled me to reduce contrast to a more reasonable level. In most cases, making this type of adjustment means that you'll have to reduce the ambient light in your viewing area, but it will help to bring out subtle details in the picture. The set's color temperature measured close to the standard of 6,500 K at the high end of the gray scale, but the low end was quite a bit off — another problem that I was able to correct using the service menu's special controls.

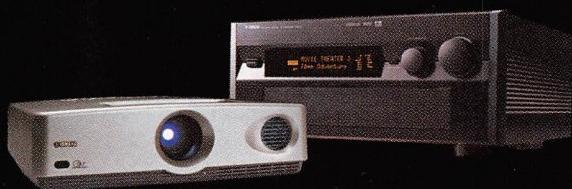
Tweaking completed, I popped *Unbreakable* into my DVD player. Highlights such as sunlight reflecting off Bruce Willis's bald head looked well balanced, and shadows displayed a wide sweep of shadings between blackest black and dark gray. In the scene where Willis first encounters Samuel L. Jackson in Jackson's apartment, shadows looked deep, and the subtle colors of the room's walls, ceiling, and furniture came across very clearly. But reds were overemphasized by the set's color decoder, giving Willis an overly ruddy





©2001 Yamaha Electronics Corporation, USA. Digital Light Processing and DLP are trademarks of Texas Instruments, Inc. Yamaha Electronics Corporation, USA. P.O. Box 6660, Buena Park, CA 90622

The RX-V1. Our most advanced, critically acclaimed digital home theater receiver. And introducing the DPX-1. Our new clearer, brighter, quieter digital cinema projector with DLP™ Technology. Together, they'll give you the best seats in the house.



 **YAMAHA®**

WHERE HOME THEATER LIVES™

WWW.YAMAHA.COM

INTRODUCING THE ALL-NEW
ANTHEM AVM 20
PREAMP • PROCESSOR • TUNER

With THX® Ultra and THX® Surround EX, no other SSP available today has as much to offer — from its stunning sonic purity, extensive and easy-to-use features and unprecedented value!

And at \$3,199 the **ANTHEM AVM 20** demands further investigation — more than we can possibly tell you in this limited space. We invite you to visit our web site, call for literature, or drop by one of our Authorized Dealers to see for yourself just how incredible the **ANTHEM AVM 20** really is!



WE'VE RAISED THE BAR... AGAIN!

test report

HIGH POINTS

- Very good high-def detail.
- Flexible input and picture memory options.
- 64-point convergence adjustment.
- Reasonable price.

LOW POINTS

- Color decoder emphasizes red.
- Scan-velocity modulation artifacts with standard program material.

appearance and causing his bright red shirt to bloom. Backing off the color control a few steps made flesh tones look more natural, but it also reduced the vibrancy of other colors to a degree.

For DVDs, I generally found it best to set the sharpness control at or near minimum. Mitsubishi's scan-velocity modulation (SVM) circuit is fairly aggressive, and when you heap the edge-enhancing effects of a sharpness control on top of that, you can wind up with an unnatural-looking picture. The SVM processing wasn't a problem with some of the fuzzier-looking satellite programs, but I did occasionally notice faint white outlines on the edges of objects while watching *Unbreakable*. Thankfully, SVM turns off automatically when high-def programs are displayed.

The TV's built-in line doubler can be set to upconvert standard video signals to either a 480p or 960i display format. You can further optimize its performance for programs that originate on video (like sporting events) or on film (movies and network TV shows like *ER*). The film mode provides 2:3 pulldown, according to Mitsubishi's product literature, although I did notice "stairsteps" along diagonal edges with DVDs played in either the 480p or 960i mode. When I compared the WT-46809's line-doubled image with the progressive-scan output of a DVD player known for its excellent picture quality, the image delivered by the DVD player looked considerably more solid and filmlike.

Now, back to that CBS high-def broadcast of *The Young and the Restless*. I have to admit, I was impressed — with the image quality, that is. The daytime drama looked very crisp on the Mitsubishi set, filling its wide 16:9 screen with the characters' wild gestures and grimaces as they lied, cheated, and seduced their way through the episode. HDTV's extra picture

detail drew out subtleties in the set's décor that would have been lost in an analog broadcast — like the lettering on the documents lining the wall of an office. Though I admired the extra-crispy HDTV picture, in this case it proved almost too much of a good thing, rendering makeup and mall-quality artwork — stuff we really don't need to see — a little too clearly.

To judge both from the variety of programs being broadcast and the descending prices of high-def-capable sets, HDTV is finally starting to creep into the mainstream. And the Mitsubishi WT-46809 is a fine example of the kind of TV that awaits viewers who are ready to cross the digital divide and want a big-screen TV that's not *too* big. Be sure to check it out. **S&V**

in the lab

COLOR TEMPERATURE

(Warm setting before calibration/Normal setting after calibration)

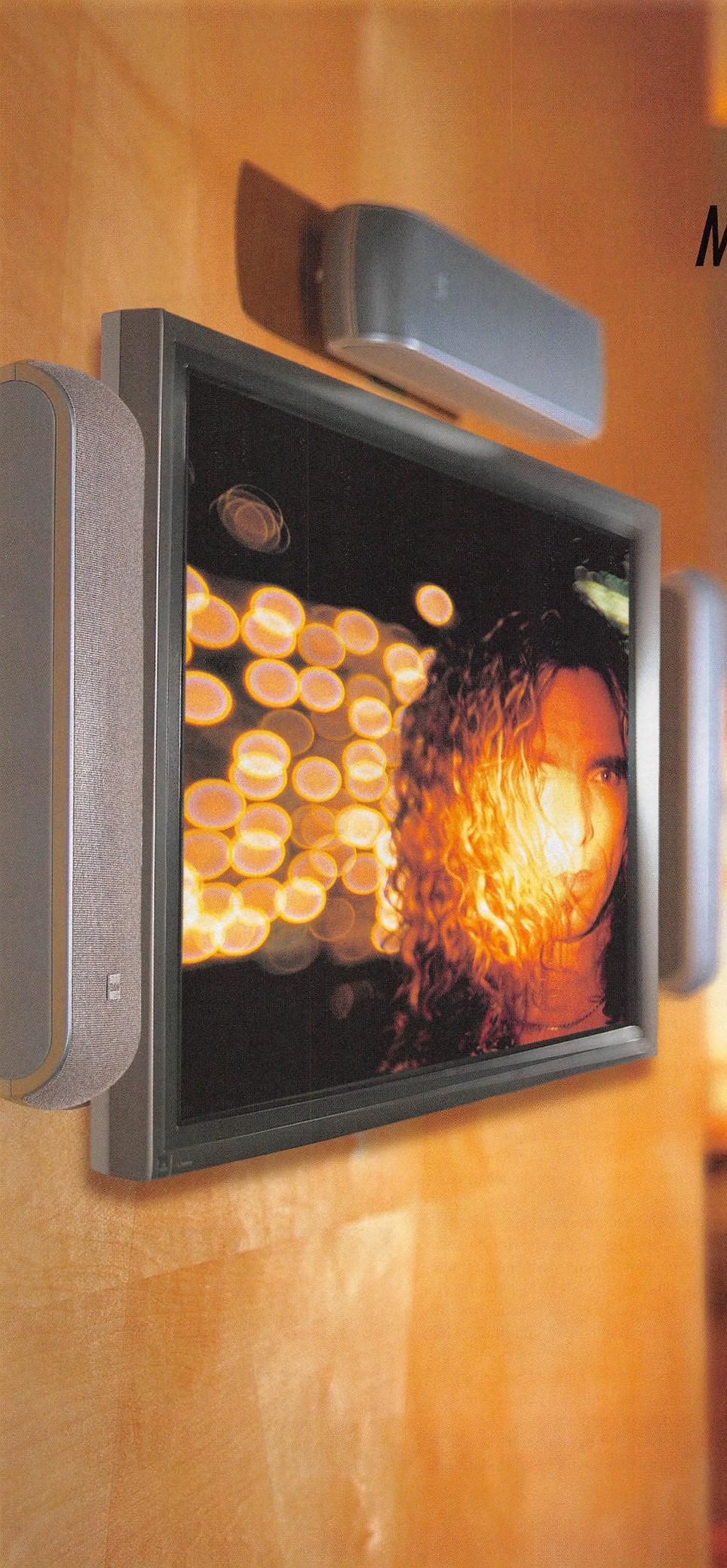
Low window	NA/6,535 K
High window	6,361/6,543 K

BRIGHTNESS

(before/after calibration) 72.0/26.3 ftL

Like many rear-projection sets, the Mitsubishi WT-46809's initial brightness reading was extremely high. A reduction to the subcontrast setting via the service menu helped to tame its light output, resulting in a more detailed picture. With the Warm color-temperature preset selected, the set measured close to the NTSC color standard on the high-window test pattern from Ovation Software's Avia DVD, but the low-window pattern was deficient in green. After calibration, the TV measured 6,500 K at both ends of the grayscale, tracking within 100 K at each 10-IRE increment. (Calibration needs to be performed by a qualified technician with specialized equipment, so discuss it with your dealer before purchase, or call the Imaging Science Foundation at 561-997-9073.)

Resolution with DVD test patterns measured the maximum 540 lines for the format. The TV's ability to hold black was excellent. Since the color decoder accentuated reds, it was necessary to decrease the color control several steps to achieve realistic colors. (Mitsubishi says it will supply a special remote control to authorized service representatives so they can adjust the WT-46809's color decoder.) Geometry was only fair, with a greater than 5% overscan in both the 4:3 and 16:9 display modes. Scan-velocity modulation (SVM), which can't be defeated via the service menu when the set is displaying standard-definition signals, created ringing artifacts around lines in a resolution pattern even with sharpness set to minimum. However, SVM is automatically defeated when the set displays high-definition signals. — A.G.



Mutual Attraction.

You wouldn't want any speaker on the wall next to your state-of-the-art Plasma or High Definition TV.

That's why we developed the new B&W VM-1 loudspeaker. Beautiful to see and hear, the VM-1 is the perfect choice for great sound and style in silver, white or black finishes.

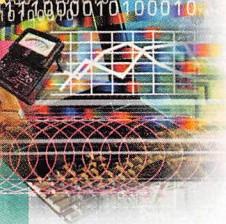
Our matching AS-1 sub adds visceral bass impact to your experience and is available in black and silver.

Now you can have performance and style at a very appealing price. Hear the new VM-1's and AS-1 at your B&W dealer. We think you'll find them mutually attractive.

B&W

www.bwspeakers.com

LISTEN AND YOU'LL SEE



Marantz

SR7200 Digital Surround Receiver



The SR7200 stands just below the top of Marantz's extensive line of non-THX-certified A/V receivers. Its capabilities are mostly familiar, with a few up-to-the-minute twists.

For instance, it decodes not only Dolby Digital and DTS 5.1-channel soundtracks but also Dolby Digital Surround EX and DTS-ES Matrix 6.1-channel soundtracks, and it has a dedicated sixth amplifier channel for a back surround speaker. And in addition to standard Dolby Pro Logic decoding for Dolby Surround-encoded material, you get Pro Logic II processing, whose Movie and Music modes can make *any* two-channel material sound more like it has 5.1 channels.

Besides DPL II, the SR7200 provides another logic-steering surround processing mode for enhanced playback of two-channel material, SRS CircleSurround CS-5.1. Both this and the DPL II modes can help keep your older stereo recordings and video programs from sounding two-dimensional compared with releases in one of the newer multichannel formats, whether

that's DVD-Video, DVD-Audio, or Super Audio CD (SACD).

Otherwise the receiver is mostly conventional, with four ambience-enhancement modes generating artificial reflections and a familiar complement of inputs and outputs, including a set of multichannel analog inputs for a DVD-Audio or SACD player. (This input is also back surround-capable, as there's a jack for a seventh channel, even though no high-resolution player offers such an output yet.)

With the help of comprehensive, easy-to-follow onscreen menus, setup was uneventful. Unlike some receivers, which allow fine-trimming of the speaker balances during playback using dedicated remote-control buttons, the SR7200 requires you to go back into the setup menu for this. Although the audio feed continues while you're making the adjustments, any video passing through is blanked, an annoying disruption when you're trying to fine-tune the sound during a movie.

The universal/programmable remote itself is nicely done, with glow-in-dark but-

tons and a handy LCD screen to tell you things like which component the remote is switched to control or how many steps are invoked by a macro command. (Up to ten steps are possible in one macro, and 11 buttons can be programmed with macros.) But the LCD is not backlit, making its readouts far less useful in a dark room. Full mastery of the remote also requires some study — the instructions for it take up six pages in the manual!

As I normally do for my receiver evaluations, to fully stress the amplifier section, I hooked up the SR7200 to an all-large-

fast facts

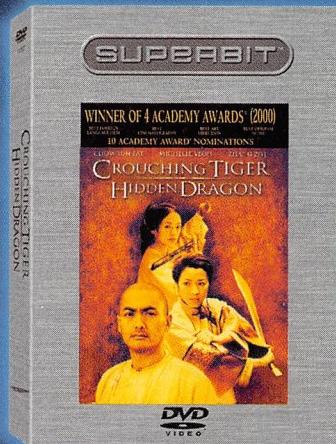
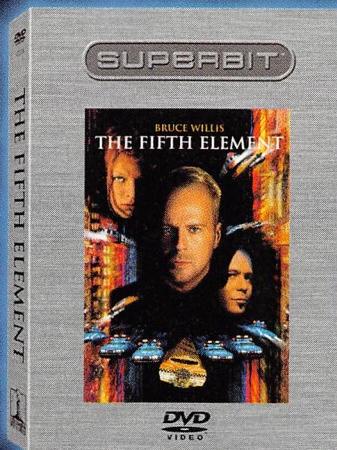
RATED POWER 105 W x 6 into 8 ohms from 20 Hz to 20 kHz with 0.05% THD, channels driven in pairs

DIMENSIONS 17½ inches wide, 6½ inches high, 15¾ inches deep

WEIGHT 33 pounds

PRICE \$850

MANUFACTURER Marantz America, Dept. S&V, 1100 Maplewood Dr., Itasca, IL 60143; www.marantz.com; 630-741-0300



THE EVOLUTION OF DVD IS HERE!

SUPERBIT™

Pure Performance

SHIFT YOUR HOME ENTERTAINMENT
SYSTEM INTO HIGH GEAR!

PURE PICTURE AND SOUND WITH NO LIMITATIONS

ENCODED AT DOUBLE THE STANDARD BIT
RATE FOR BETTER PICTURE RESOLUTION

DTS AND DOLBY DIGITAL 5.1 SOUND

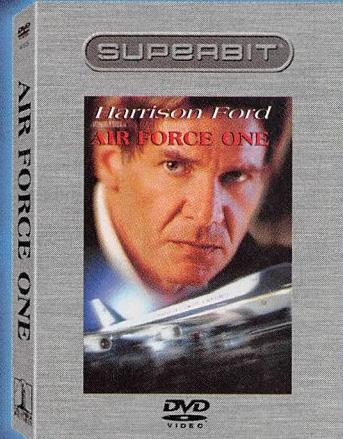
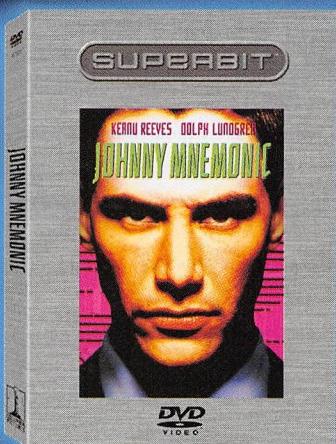
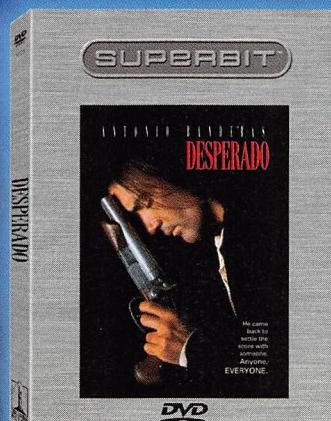
USE YOUR EXISTING HOME THEATER
EQUIPMENT TO ITS OPTIMAL CAPACITY

NOW YOU HAVE A CHOICE
IN DVD VIEWING

BUY THEM TODAY AT

BORDERS®

www.borders.com



PG 13

R

R

COLUMBIA TRISTAR



HOME ENTERTAINMENT

DIGITAL
dts
SOUND

DOLBY
DIGITAL

© 2001 Columbia TriStar Home Entertainment. All Rights Reserved.
© 2001 Layout and Design Columbia TriStar Home Entertainment.



LIFE IS DIFFERENT WHILE

The fascination of the senses. Designed in avantgarde style,
YOU'RE LISTENING
the two floorstanding loudspeaker models Karat M 50 DC

and Karat M 70 DC blend in with every modern interior. To

keep the front exceptionally narrow, the woofers have been

fitted laterally with a large diaphragm surface, resulting in

an impressive bass reproduction. For more information —

please contact: Canton USA (612)706-9250 Phone,

(612)706-9255 Fax, www.cantonusa.com

Made in Germany

CANTON

pure music

test report

key features

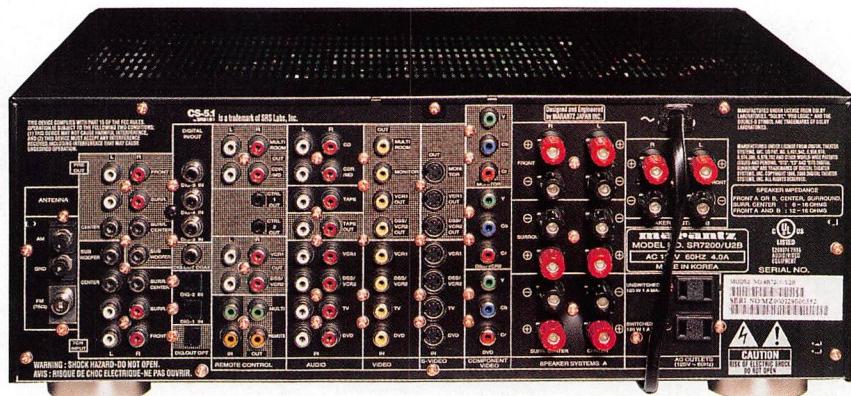
- Dolby Digital, DTS, and digital-domain Dolby Pro Logic decoding
- Decoding and amplification for Dolby Digital Surround EX and DTS-ES Matrix 6.1-channel soundtracks
- Dolby Pro Logic II and SRS CircleSurround CS-5.1 multichannel processing for two-channel material
- 4 ambience-enhancement modes
- Universal/programmable infrared remote control with LCD readout
- 3 coaxial, 2 optical digital audio inputs; 1 coaxial and 1 optical output
- 5 A/V inputs, 2 outputs, all with S-video
- 2 component-video inputs, 1 output
- 7-channel analog audio input
- 3 analog audio-only stereo inputs, 2 outputs
- AM/FM tuner with 30 presets
- Preamp outputs for 7 channels (including back surround)
- Multiway binding posts for all speaker outputs
- Stereo line-level audio and composite/S-video outputs and other facilities for multiroom applications
- Sleep timer

speaker setup, with no separate subwoofer. Under critical listening conditions (low ambient noise) in our 12 x 22½ x 8½-foot listening room, and at movie-theater volume levels, the SR7200's sound quality became strained and congested during no-holds-barred sequences of action-movie soundtracks (like the opening beachhead scene of *Saving Private Ryan* and the chase leading up to the final confrontation in *Terminator 2*). At the same volume settings, the receiver's background-noise levels also measured slightly higher than normal playing multichannel music from DVD-Video discs or DTS-encoded CDs as well as the few movie soundtracks that ever get soft enough for system noise to be audible (*Princess Mononoke*, for example).

The added noise — an elevated background hiss — was distinctly audible with multichannel Dolby Digital test tones that are specifically designed to reveal a receiver's noise performance. The SR7200's performance was reminiscent of what we used to get in the early days of analog Pro Logic decoding. Playing stereo CDs without any multichannel processing, the receiver appeared to have enough oomph for the loudest passages, but the background noise was still a little higher than it should have been.

Not surprisingly, my subsequent lab tests (see "in the lab," page 58) revealed shortcomings in the SR7200's multichannel output power and inherent noise level. I must point out that these limitations might not pose a problem for you if your home theater setup meets at least one of the following conditions: 1) you have high-sensitivity speakers, rated above 92 dB; 2) your home theater is smaller than average or the speakers are placed close to the listening position; or 3) you don't try to play any multichannel material, whether movie soundtracks or music, as loud as in a movie theater or a live concert (even classical music can get very loud, if only during certain passages).

Turning down the volume even slightly will greatly reduce the chance of audible congestion under worst-case signal conditions. Turning it down substantially will

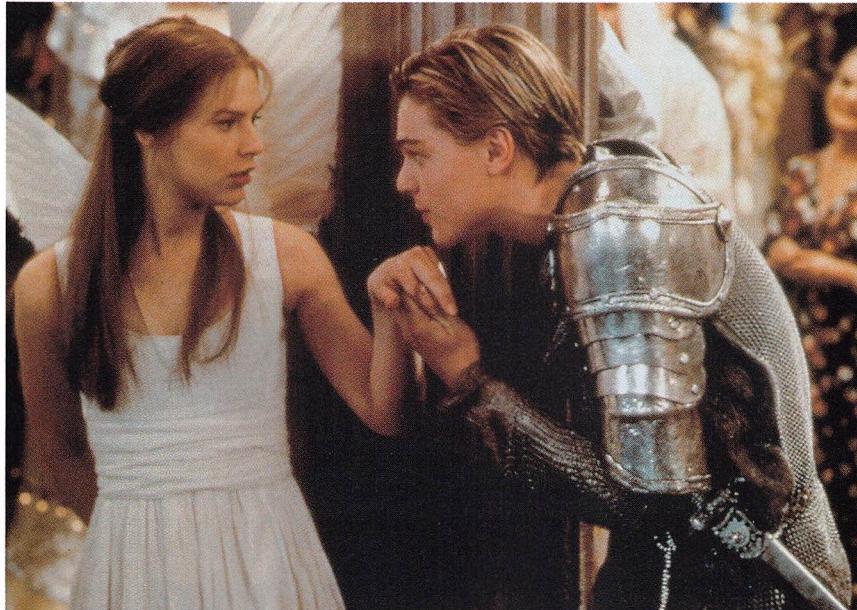


also make the receiver's background noise levels less noticeable. You may be able to assess in a dealer's showroom whether playback at these lower levels (a volume setting at -2 or below) meets your listening needs. Finally, using a subwoofer might also help alleviate the power shortage since high-level deep bass (from explosions, earthquake rumbles, and the like) is what's most likely to overload the receiver's amplifiers. The SR7200's subwoofer output, however, had dynamic-range problems of its own, as the lab tests revealed.

Listening for pleasure at less than full theatrical levels (which can seem deafeningly loud in a home), I managed to get some enjoyment out of the SR7200. Aside from the elevated noise, its 6.1-channel decoding capabilities are excellent and aided me in my continuing quest to find 5.1-channel movie soundtracks that decode nicely into 6.1 channels.

My latest discovery is Baz Luhrmann's extraordinary *Romeo + Juliet* (20th Century Fox), a high-voltage modern-dress "Verona Beach" version of Shakespeare's *Romeo and Juliet*. It has quite a few sequences that benefit from a back surround speaker, not the least of which is the costume party where R meets J, with its accompanying loud music and crowd noises. (I can't wait for the DVD of Luhrmann's even more stunning *Moulin Rouge*).

This receiver seems especially adept at

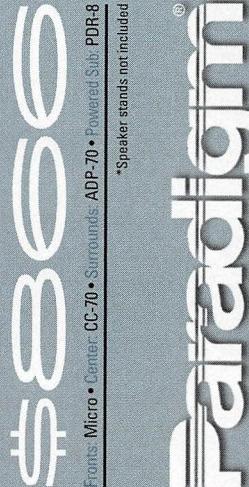


Romeo + Juliet, set in a modern "Verona Beach" in America rather than Verona in Renaissance Italy, is a 5.1-channel DVD with quite a few sequences that can benefit from 6.1-channel playback, like the costume party where R meets J.

HIGH POINTS Excellent 5.1- and 6.1-channel decoding. Useful DPL II and CircleSurround multichannel-synthesis modes.	LOW POINTS Noisy. Not enough multichannel power for cinema-level playback. No bass management for multichannel analog input.
--	--

quasi-multichannel playback of stereo material, and I got a kick out of morphing two-channel recordings into something resembling 5.1 channels with the Dolby Pro Logic II and CircleSurround CS-5.1 modes. Neither system provides any sort of fine-tuning adjustments (nor do the receiver's relatively ineffective conventional ambience modes), so how well the processing works — and which processing mode produces "better" results — will vary from one stereo recording to another.

For the most part, I preferred the CS-5.1 mode. It added both a sense of directionality and space without imposing too much distance on pop vocals (as the ambience modes tended to do), and it was a bit more assertive than DPL II, which in comparison often sounded tame in both its Movie and Music modes. The Movie mode and



THE ULTIMATE IN SOUND FOR MUSIC AND HOME THEATER®

In the US, contact AudioStream MPO Box 2410, Niagara Falls, NY 14302 tel 905 623-0180
 In Canada, contact Paradigm 205 Annageen Blvd, Mississauga, ON L5T 2V1 tel 905 664-1394
 Copyright ©2001 Paradigm Electronics Inc. and Bayav Corp. Prices reflect manufacturer's F&R.

Thinking about Home Theater? Music? If you're planning to buy separate speaker systems for each, here's a word of advice: don't!

Good sound is good sound; whether you want to rock out, waltz the night away or swing like crazy, daddy-o, these new Paradigm® speakers will do it all — and they'll shake your Home Theater, too!

Paradigm® speakers are sonically accurate, which means no matter what you want to hear, they'll sound better than anything else out there. Get in touch with your local authorized Paradigm® dealer today and ask to hear the Paradigm® System One.

SYSTEM 1

 An advertisement for Paradigm System 1. It shows several speakers (including a tall floor-standing model and smaller bookshelf models) and a subwoofer, all with black grilles and silver frames, arranged on a light-colored wooden surface. The background is a dark blue gradient.

test report

CS-5.1 were both useful in creating a sense of envelopment with TV miniseries soundtracks like those of the SciFi Channel's *Dune* and the BBC's bizarre *Gormenghast* (a sort of perverted *Alice in Wonderland* for adults only). Note, however, that the CS-5.1 mode tends to sound *much* louder than stereo or Pro Logic playback and overemphasizes the surround speakers. CS-5.1 can make many kinds of music

sound richer and more involving, but only if you reduce the surround-speaker levels in the setup menu.

So if your home theater isn't too big, you have high-sensitivity speakers, or you prefer moderate volumes, you might also get a kick out of the Marantz SR7200's surround sound modes, which at least partly redeem its otherwise unexceptional performance. **S&V**

in the lab

DOLBY DIGITAL PERFORMANCE

All data were obtained from computer-generated test signals incorporating dither, which sets limits on measured distortion and noise performance. The dialogue-normalization setting embedded in Dolby Digital test signals was 27. Reference input level is -20 dBFS, and reference output is 1 watt into 8 ohms. Reference output was obtained with the volume set to +2. Except for subwoofer-related tests, all speakers were set to "large," subwoofer on. All are worst-case figures where applicable.

Output at clipping (1 kHz into 8 ohms)

one channel driven	
(center).....	135 W (21.25 dBW)
five channels driven	
(fronts).....	29 W (14.5 dBW)
(surrounds).....	52 W (17.25 dBW)
six channels driven	
(all channels).....	27 W (14.25 dBW)

Distortion at 1 watt

(THD+N, 1 kHz, 8 ohms).....	0.077%
-----------------------------	--------

Noise level (A-wtd, 16-bit signal)

right front channel	-66.3 dB
---------------------------	----------

Excess noise (with sine tone)

16-bit (EN16).....	+8.9 dB
--------------------	---------

Frequency response

20 Hz to 20 kHz	+0.29, -0.15 dB
-----------------	-----------------

Subwoofer-output frequency response

24-dB/octave rolloff above -3-dB point of 80 Hz	
---	--

High-pass-filter frequency response

12-dB/octave rolloff below -3-dB point of 80 Hz	
---	--

Maximum unclipped subwoofer output

(subwoofer set to 0 dB; see notes).....	4.2 volts
---	-----------

Subwoofer distortion (6-channel, 31-Hz,

0-dBFS signal played at reference level; subwoofer trim at 0).....	0.46%
---	-------

STEREO PERFORMANCE, DIGITAL INPUTS

Volume setting for reference output level was -1. Speakers set to "large," subwoofer off. Resolution of digital input signals was 16 bits.

Output at clipping (1 kHz, both channels driven, 8/4 ohms).....	120 W (20.75 dBW)/105.42 W
--	----------------------------

Distortion at 1 watt

(THD+N, 1 kHz, 8/4 ohms).....	0.046/0.042%
-------------------------------	--------------

Linearity error (at -90 dBFS).....	+1.8 dB
------------------------------------	---------

Noise level (A-wtd).....	-70.0 dB
--------------------------	----------

Excess noise (without/with sine tone)

16-bit (EN16).....	+5.6/+5.2 dB
--------------------	--------------

quasi-20-bit (EN20).....	+22.4/+22.4 dB
--------------------------	----------------

Noise modulation

Frequency response

44.1-kHz rate	20 Hz to 20 kHz +0, -0.37 dB
---------------------	------------------------------

96-kHz rate	20 Hz to 46.6 kHz +0, -2.4 dB
-------------------	-------------------------------

The principal deficiency of the Marantz SR7200 verified in our lab tests was its relatively high noise levels, especially in Dolby Digital operation, where they were about 10 dB worse than the theoretical minimum and audible as an elevated background hiss under critical listening conditions. Under many domestic conditions, however, this noise is not likely to be audible, either because of a lowered volume setting or because it's masked by typical program material and ambient sounds.

The SR7200's all-channels-driven power output in 5.1- or 6.1-channel operation was around 7 dBW lower for the front channels than its one-channel maximum output (as well as significantly lower than the manufacturer's ambiguous specifications). While this is not the first receiver we've seen that has behaved in this way, when the lower output power is combined with the high noise level, it means that the SR7200's overall dynamic range under stressful multichannel conditions would be about 16 dB lower than that of a receiver with superb noise performance and capable of delivering at least 100 watts to all channels at once.

Despite the use of 24-bit digital-to-analog converters — or perhaps *because* of the particular converters used — the receiver's noise levels prevent true 24-bit PCM signals, which you can get from a DVD-Video player, from having more than 17 bits of dynamic range. Frequency response at a 96-kHz sampling rate was fine, however.

At any setting of the subwoofer-trim control, the subwoofer output was limited over the top 6 dB of its theoretical dynamic range. That is, from 6 dB below a worst-case input level all the way up to full, worst-case level, the subwoofer output level did not change — yet another restriction of the system's dynamic range.

We're now taking basic measurements of multichannel analog inputs on receivers. The signal quality through the SR7200's inputs was approximately equivalent to that of an average DVD-Audio player's multichannel analog outputs.

— D.R.

Bring the holidays
to life.

Royal Egg nog

1 qt. Eggnog
6 oz. Crown Royal
Stir. Chill.
Garnish with nutmeg.
(Serves 6 - 8)

Crown Royal



'Tis the season for giving.

Enjoy our quality responsibly • Visit crownroyal.com

CROWN ROYAL • IMPORTED IN THE BOTTLE • BLENDED CANADIAN WHISKY • 40% ALCOHOL BY VOLUME (80 PROOF) • ©2001 JOSEPH E. SEAGRAM & SONS, NEW YORK, NY



Music & Cinema so accurate...

you will think you are there!

Our speakers are unsurpassed in:

- **Dynamic Range**
- **Clarity & Detail**
- **Sensitivity**
- **Visceral Impact**
- **Soundstage & Imaging**
- **Aesthetics**
- **Value & Build Quality**

With qualities such as these it's hard to imagine buying another speaker. Yet we at Legacy Audio understand that buying audio is still all about making an informed and personal decision. To do this you must be able to compare speakers with the most critical tools available, **your ears**. That is why after almost 20 years of offering loudspeakers factory direct we've decided to give our loyal customers what they want, **a chance to listen and see the products that have made us famous**. Soon you will be able to audition our fine products at quality hi-fi shops and salons. Rest assured these locations will provide the same level of service that Legacy Audio perfected.

Visit a Legacy Authorized Dealer in your area soon!

CONGRATULATIONS to our newest dealers in:

Green Bay, WI
Los Angeles, CA
New Haven, CT
Portland, OR
Washington, DC
Denver, CO



See our entire line of products @
www.legacy-audio.com
or visit a dealer near you.

Integra

DPS-7.2 DVD-Audio/Video Player



The Integra DPS-7.2 joins the small but growing list of THX Ultra-certified DVD players, which already includes the first-rate Integra DPS-9.1 (reviewed in February/March). It includes full Dolby Digital and DTS decoding as well as DVD-Audio playback — which comes next to last in the manual's list of the 15 most important features! The player's ability to play MP3 files recorded on a CD-R or CD-RW isn't even on the list.

Some other aspects of the DPS-7.2 that would have merited special attention a year or so ago have become so commonplace that they're passed over as well. For example, in DVD playback you can choose from three fast-scan speeds in forward and reverse (the latter being somewhat jerky in appearance), two slow-motion speeds in reverse (labeled merely "1" and "2"), and four slow-motion forward speeds ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, and $\frac{1}{16}$ normal speed). Although the remote control's buttons are too close together for comfort, using the remote made it fairly easy to switch between these modes to closely examine interesting picture segments, like the nuclear explosions and visually spectacular failed rocket launches in *Nukes in Space: The Rainbow Bombs*, a

documentary narrated by William Shatner (talk about failed rocket launches).

While the DPS-7.2 does not go where no DVD player has gone before, its MP3-playback capability is still not standard equipment. But there are some restrictions as to what it can play. The MP3 files must be recorded at a fixed bit rate and have an original sampling rate of 44.1 kHz (as is the case with most "ripped" CDs) or 48 kHz. Any CD-R or CD-RW disc (whether it holds MP3 files or CD audio) must have been finalized by the recorder, and the DPS-7.2 will play only the first session of a computer-file "multisession" disc.

Setting up the player was uneventful and shouldn't cause any anguish unless you plan to use the player's multichannel analog outputs for Dolby Digital or DTS playback. Unfortunately, the onboard bass management doesn't allow a setting of "small" for the front left/right speakers. Even THX-certified home theater speaker systems require a "small" setting (THX Ultra-certified speakers require an 80-Hz crossover point rather than the 100-Hz crossover provided here). Unless your system has just the right configuration of speakers and you set them up just right, things could get screwed

up in the low-frequency region. For that reason, we recommend (and both THX and Dolby Labs agree) that you use the player's digital audio outputs and let your A/V receiver or preamp/processor do the Dolby Digital (and DTS) decoding. Like every other DVD-Audio player we've seen, the DPS-7.2 provides no bass management for the obligatory analog output from DVD-Audio discs, though you might assume that it does from reading the setup menus and the manual.

Setup can actually be performed using the front-panel controls, since they include



PHOTOS BY TONY CORDEO

fast facts

KEY FEATURES

- Full Dolby Digital and DTS 5.1-channel decoding with multichannel analog outputs
- DVD-Audio playback
- Playback of audio and MP3 CD-Rs and CD-RWs
- Component-video output

OUTPUTS two each composite-, component-, and S-video; one coaxial and two optical digital audio; two analog stereo pairs; one set multichannel analog audio

DIMENSIONS 17 $\frac{1}{8}$ inches wide, 3 $\frac{5}{8}$ inches high, 12 $\frac{3}{8}$ inches deep

WEIGHT 8 pounds

PRICE \$800

MANUFACTURER Integra, Division of Onkyo USA, Dept. S&V, 18 Park Way, Upper Saddle River, NJ 07450; 800-225-1946; www.integrahometheater.com

test report

a cursor-control joystick and menu buttons. These will come in handy on the day the remote's batteries die and you have no replacements. However, the front-panel labeling is all but illegible at arm's length and in subdued lighting. You'll need a flashlight — its batteries had better be working — and maybe even a magnifying glass!

In CD playback the DPS-7.2 both measured and sounded superb — its stereo output was among the cleanest you can get today. Despite some less than stellar lab data (see "in the lab"), it also sounded excellent in DVD-Audio playback with a multichannel system consisting of five large main speakers plus a subwoofer. That's because even the master tapes of DVD-Audio titles having the widest dynamic range I've heard, like Morton Subotnick's synthesizer music on Mode, don't approach the theo-

retical dynamic range of the DVD system, so a player's deficiencies in this regard are masked by the noise in the masters.

Besides, the hallmark of any THX-certified DVD player is its video performance. (In fact, for DVD players a THX certification applies *only* to the video behavior, a detail that somehow gets left out of data sheets and promotional material. I can't imagine that the folks at THX would be satisfied with the DVD-Audio bass-management situation if they were certifying the audio circuitry of DVD players, too.) And so it proved with the DPS-7.2, which had superb video reproduction to start with — an almost unbelievably flat luminance frequency response, for example — and whose behavior could be tweaked to near perfection using the player's picture-quality controls.

Among those controls, all of whose set-

in the lab

DVD-VIDEO PERFORMANCE

Measurements were made from a variety of DVD test discs, all through the player's composite-video output, at factory default settings (see text).

Maximum white level +4 IRE (adjustable)

Setup level (see main text) 0 IRE (adjustable)

Differential gain 1%

Differential phase 1°

Luminance frequency response

(re level at 1 MHz)

at 4 MHz ±0 dB

at 5 MHz +0.1 dB

at 6 MHz ±0 dB

at 6.75 MHz (DVD limit) -0.1 dB

Onscreen horizontal resolution 540 lines

Pixel cropping left 0, right 0, top 0, bottom 0

In-player letterboxing fair

DVD-AUDIO PLAYBACK

All tests were done using a custom-made test DVD-R consisting of computer-generated signals containing dither, which limits measured noise and distortion performance. Results are representative, not necessarily worst-case. The kHz figures in the test conditions (left) represent the sampling rate of the digital signal.

Noise level (re -20 dBFS, A-wtd, 24-bit signals)

44.1, 48, and 88.2 kHz -87.0 dB

96, 176.4, and 192 kHz -86.3 dB

Frequency response

44.1 kHz 20 Hz to 20 kHz +0, -1.0 dB

48 kHz 20 Hz to 21.3 kHz +0, -1.2 dB

88.2 kHz 20 Hz to 38.6 kHz +0, -3.3 dB

96 kHz 20 Hz to 42.1 kHz, +0, -3.77 dB

176.4 kHz 20 Hz to 69.6 kHz +0, -12.0 dB

192 kHz 20 Hz to 83.2 kHz +0, -8.4 dB

Excess noise (re perfect 24-bit performance)
all sampling rates +38.1 dB

Noise modulation (all sampling rates) <0.5 dB

Aside from a very slight rolloff of the extreme high frequencies for all channels and all audio modes — a rolloff that may be just barely audible under the most critical listening conditions, but only in comparison with devices having flatter outputs — the lab performance of the Integra DPS-7.2 ranged from good to superb. CD playback came within a fraction of a decibel of theoretically perfect noise performance with 16-bit signals, and the quasi-20-bit excess-noise (EN20) figure was less than 10 dB, which is outstanding. Dolby Digital performance was nearly as good. (Full data for both are omitted because of space limitations.)

DVD-Audio performance was about 6 dB noisier than the best I've seen from other DVD-Audio players and quite a way from what the system is theoretically capable of delivering. Measured DVD-Audio noise levels were only about 12 dB better than for CDs, indicating approximately 18-bit performance. Despite these shortcomings, this is still distinctly and audibly superior to the CD system. At normal to slightly higher than normal playback levels, the Integra's inherent noise should be inaudible with DVD-Audio discs.

We tested an early-run sample of the player, and one of its component-video output jacks (B-Y, or C_b) wasn't working, so we couldn't use component-video connections for viewing or measurements. But since the component signals are generated earlier in the signal path than either composite- or S-video signals, I expect that regular production-line samples of the DPS-7.2 will have component-video behavior as superb as our sample's composite- and S-video performance. — David Ranada

"My jazz
is very, very
personal.
So are my
speakers."



While the beauty of jazz is often in its improvisation, you shouldn't have to improvise when it comes to listening to it. To create a sound that's as personal as your taste, just mix and match athena's collection of full-range speakers with our active subwoofers. Jazz up your life with athena.

Create your own sound

athena TECHNOLOGIES®
3641 McNicoll Avenue
Toronto, Ontario
Canada M1X 1G5
www.athenaspeakers.com



© 2001 athena TECHNOLOGIES®

Get more from your hi-fi...

HIGH POINTS

Superb video performance.

Wide range and variety
of picture controls.

Excellent CD performance.

LOW POINTS

No progressive-scan output.

No bass management for DVD-Audio.

Front-panel labels hard to read.

tings can be saved in three different picture memories, are those for black level (brightness), white level (contrast), hue (tint), and chroma (color). I turned the black-level control full up to elevate the player's setup level from the Japanese standard 0 IRE to the American standard +7.5 IRE. I also turned the white level down one step from its midpoint to remove the +4-IRE white-level error. To compensate for a slightly high color output, I also turned down the chroma level by two steps from its midpoint. Keeping Gamma at its midpoint setting, Fine Focus on, and DNR (video noise reduction) all the way down gave me a player that reproduced DVD test patterns just as precisely as our lab's test-pattern generator could make them.

Viewed on a correctly set up monitor, movies had superb picture quality even with "just" an S-video connection. Blacks were rich but didn't hide any of the details in the many darkish interior and subterranean scenes that give *Enemy at the Gates* its unrelieved claustrophobic morbidity. Colors seemed right on the button in live-action films and even more vibrant and stunning in animated classics like the *Toy Story* DVDs and *A Bug's Life*. And, of course, with a flat luminance frequency response, detail was as sharp as it gets with the DVD system. I imagine the picture produced by the DPS-7.2 will look fine when enlarged on a big-screen projection set.

The only thing lacking in the video department is progressive-scan capability, which is sort of surprising since that's the most trendy video feature among DVD players (see "DVD's Most Wanted," page 90). So if your present TV doesn't accept progressive-scan signals — possibly because it already converts interlaced signals to a progressive-scan format internally — and you're not planning on buying such a TV soon, the Integra DPS-7.2 may very well be the DVD player for you.

S&W



"Powerful and dynamic sound;
refinement; great value." -
(What Hi-Fi? - Pi-10, March 2001)

"What really impresses about the Pi-20s
is their sound...." -
(What Hi-Fi? - Pi-20, March 2001)

WHAT HI-FI? ★★★★★

WHAT HI-FI? ★★★★★

Stuff ★★★★★

HIFI CHOICE ★★★★★



Pacific by Wharfedale

The Wharfedale sound has always been famous for its 'openness' and musicality, but our new Pacific range has stunned even the notoriously fickle British press.

Never before has such a lot of speaker been available for such an attractive price. Visit us on-line for more information.

www.wharfedale.com

IAG America Inc., 180 Kerr Place, Norwood, MA. 02062 Tel (781) 440 0888



user's report BY TERI SCADUTO

EchoStar

DishPVR 501 Satellite Receiver/Recorder



Acording to a recent survey by New York investment bank Veronis Suhler, the average American watched 1,633 hours of TV last year. How much of that almost 4½ hours a day did you spend actually watching shows you wanted to see? And how much was spent looking at ads or channel surfing in search of something worth seeing? And how about all the times you settled for a program that didn't really interest you? In short, how much of your TV time was wasted?

Of course, you could argue that *any* time spent in front of the boob tube is wasted—but let's not go there. Assuming that TV watching is an enjoyable, even an integral, part of your leisure time, and that your leisure time is limited, doesn't it make sense to do whatever you can to watch only those shows that truly appeal to you?

EchoStar's DishPVR 501 Dish Network satellite receiver can help you make the most of your viewing time. Its built-in hard-disk recorder—*a.k.a.* a personal vid-

eo recorder or PVR—provides up to 35 hours of tape-free digital recording and lets you pause live programming or create your own instant replays. Since the hard disk records the digital satellite signal directly, there's no difference in audio or video quality between live and recorded programming. Unlike rival products built around the TiVo and UltimateTV services, there's no fee for the PVR features—though the DishPVR doesn't offer the extensive search options those services do. And with a special offer available only for new Dish Network customers through the end of the year, you can even get the equipment for free when you subscribe to a year's worth of programming at \$50 or \$60 a month.

The receiver is an unassuming basic black box, with just enough front-panel controls to let you power it up, access the onscreen menus and program guide, and make your selections. These controls aren't likely to get much use, but it's comforting to know you can still use the receiver if

you misplace the remote or its batteries go dead.

Even so, you'll definitely want to keep track of the DishPVR remote control. Once you've programmed it to operate your TV, DVD player, and A/V receiver and have gotten a taste of pausing and rewinding live TV from the comfort of your couch, you won't want to let this baby out of your sight. Fortunately, its platinum color helps it stand out from the crowd—

fast facts

KEY FEATURES

- Hard-disk recorder with 35-hour capacity
- Interactive TV services
- Optical digital audio output
- UHF/infrared multiroom remote control

DIMENSIONS 14 inches wide, 3⅓ inches high, 10 inches deep

WEIGHT 11 pounds

PRICE \$399

MANUFACTURER EchoStar, Dept. S&V, 5701 S. Santa Fe Dr., Littleton, CO 80120; www.dishnetwork.com; 800-333-3474

Most speakers give you true stereo only in one small "sweet spot."

These aren't most speakers.



Live Performance
You hear reflected and direct sound.



Conventional Speakers
Less realistic, as you hear mostly direct sound.



Direct/Reflecting® Speakers
You hear reflected and direct sound — much like a live concert.

Introducing the all new Bose® 701® Series II Direct/Reflecting® speakers

Listen to other speakers — even those costing more. Then listen to these. You'll hear a noticeable difference — like Direct/Reflecting® speaker technology. Using a unique blend of reflected and direct sound, this Bose innovation lets you hear concert-like performance throughout the room. New bass reproduction technology, exclusively from Bose, gives you deeper, richer bass without the audible port noise or compression of most speakers. And thanks to dedicated

amplification and integrated signal processing circuitry, you hear lifelike music with all its fullness — even at low background levels. It's performance made possible only through advanced technology. And it's technology available only from Bose, the most respected name in sound. Hear the difference.

For the names of dealers and our own Bose stores near you, call:



1-800-ASK-BOSE
Ext. Z81 275-2673

ask.bose.com/wz81

BOSE
Better sound through research®

"It's like
front row
seats to
my favorite
concerts...
in my home."

user's report

and the remote lets you tuck three other clickers out of sight.

The remote uses both UHF and infrared (IR) signals to control the satellite receiver, but only IR signals to control the other devices. The UHF signals work from as far away as 100 feet, allowing you to operate the DishPVR from another room. In my case, I hooked things up using a wireless A/V link so my son could watch TV in the kitchen. The remote worked from there without a hitch.

When your program package includes 150 stations, having a way to sort them — and to limit them — is vital. There's a good chance parents will deem some of those available programs unsuitable for their children to watch. Fortunately, the receiver provides an extensive system of lockouts. You can hide adult channels, prevent kids from ordering pay-per-view events, and lock out events by rating or channel.

The DishPVR also provides several methods of sorting channels. The Theme menu lets you view listings by category: Movies, Sports, News/Business, Family/Children, Education, Series/Specials, Music/Arts, or Religious. Choose Movies, for instance, to see a list of films currently playing. Keep scrolling to see what's coming up next — or this evening. Select the Browse mode to keep watching the current program while scrolling through information about what's on the other channels, displayed on a translucent banner at the bottom of the screen. If something looks promising, just press Select to switch to that channel.

Dish Network provides up to six different program guides: All Channels (everything available), All Subscribed (every channel that you receive), and four Favorites lists that you can personalize for various family members or by category. It might seem redundant to have a Favorites list of movie channels when you can select Movies on the Themes menu. But your customized list will show only those stations you receive, and you can omit channels you're not likely to watch.

I used my Favorites to create lists named for and reflecting the tastes of my family members — heavy on sports for my husband, cartoons for my son, home improvement for me. There's a lot of overlap: all

the lists include the local broadcast channels, the SciFi Channel, and premium movie channels. These condensed listings are much easier to deal with than the huge All Subscribed program guide. I was initially a little disappointed by the lack of any automated way of finding future programs that might be of interest, but I got over that pretty quickly when I remembered that there was no subscription fee for the hard-disk recording features as there is on some competitors' products.

You can opt to view a full-screen guide, which displays six channels per screen, or a four-line half-screen guide with the current program playing in the top right corner. I like to scan the listings as quickly as possible, so I kept the full-screen guide on at all times. My husband, however, kept switching it back to half-screen mode so he could watch one show while seeking something more interesting.

But once you've found something to watch, the real fun begins. The DishPVR automatically records up to an hour on whatever channel it's tuned to. This goes on continually and completely invisibly, and is called, logically enough, Automatic Recording. After an hour, the earlier portion is deleted and replaced with the most recently shown program. Change the channel, and the last channel's recording is deleted as the hard-disk recorder starts afresh on the new channel.

What does that mean to you? Well, you can tune in a program and watch (or even leave the room) for a few minutes. As soon as some material has been recorded, you can start manipulating it. Pause it to go get a snack, and start it up a few minutes later from where you left off. Then fast-forward through the commercials to catch up to the show in real time. Rewind or hit the Skip Back button to catch a funny line you missed the first time or for an instant replay of a controversial strike call. And if, after the first four innings, it starts to look as if the pitcher might be heading toward a perfect game, it's not too late to record the entire game. Just press Record, and the DishPVR will begin storing at the beginning of the program (as long as it hasn't gone on for more than an hour). This is called On Demand recording, and it has



Shouldn't your speakers deliver a performance that sounds this sensational? Well, have a listen to athena's breakthrough system. It's modular. So you go with our awesome full-range bookshelf speakers or mix and match with an active subwoofer. It's your choice. With athena, you'll always have front row seats.

Create your own sound

athena TECHNOLOGIES®
3641 McNicoll Avenue
Toronto, Ontario
Canada M1X 1G5
www.athenaspeakers.com



© 2001 athena TECHNOLOGIES®

one minor drawback — you must remember to press Stop when the show ends, or the hard drive will keep recording until it runs out of space.

The Automatic and On Demand modes are fine for spur-of-the-moment recordings. But with a little advanced planning, it's easy to set up Event Timers to record (or just tune in) upcoming shows. Find a program on a Themes menu, while Browsing, or on a program guide. Highlight it, press Select, and the Event Timer menu appears with several options. You can choose to start recording one minute early to avoid missing anything (or if you don't trust the DishPVR's clock, which proved to be spot-on accurate). And any Event Timer can be set up to record a show on a one-time basis, weekly, daily, or on weekdays only. Select Protect Recording, and the DishPVR 501 won't record over that program without checking with you first.

There are four types of Event Timer: PVR, Auto-Tune, Reminder, and VCR. Select PVR, and you get an on-screen clock-icon reminder just before the show starts, then the receiver tunes to the right channel and begins recording. Auto-Tune reminds you that a program is about to start and then tunes it in for you. Reminder warns you that a selected show is about to start but doesn't tune it in. In VCR mode, if the receiver has been set up to control a VCR (and that deck has been left on), the DishPVR issues a reminder, tunes to the program, and starts the VCR recording.

VCR mode comes in handy if you know you're running low on disc space or plan to watch the program elsewhere. I rarely used it, however, because shows recorded in PVR mode can always be transferred to videotape later on. And old recordings are automatically recorded over unless you specifically protect them. Meanwhile, while they're on the hard drive, it's easy to pause, fast-forward, and otherwise manipulate the digital data. And while you're recording a show in PVR mode you can play back a previously stored program — that's not possible during VCR recordings. You can't, however, watch another channel during recording because the DishPVR 501 has only one tuner.

There are still more recording modes, including the Manual Event Timer. This is the one you'd use to record something in the "distant future" (not yet appearing on the program guide, which displays about two and a half days of scheduling information).

HIGH POINTS

- Four favorite-channel guides.
- RF remote control for multiroom use.
- Instant Weather service.
- Future interactive features.
- Low price.

LOW POINT

- Limited program-guide search capabilities.

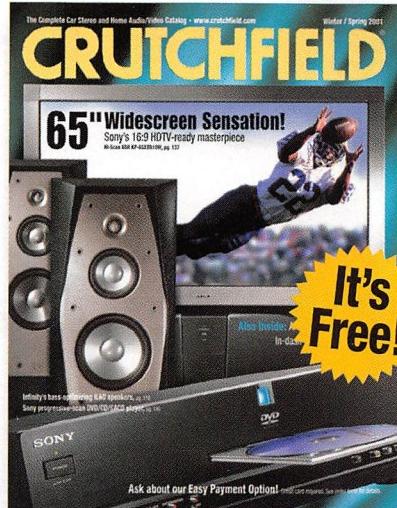
tion). Despite the many modes, it's not confusing — one mode is easier than the next to use.

And once it hits home that the DishPVR is *always* recording, you'll find that you almost never watch TV in real time anymore. Go into the living room and turn on *NYPD Blue* at 10 p.m. Then go make a quick phone call. When you join the show already in progress, you can skip back to the beginning and then fast-forward through all those annoying commercials. There's no need to get upset if the phone rings — just hit Pause, and you won't miss a thing.

Or you might just find it a more convenient way to time-shift shows to watch at your leisure. That's what happened to me. Prime time in my home is filled with board games, baths, and bedtime reading; it's anything but prime viewing time. It was too much of a hassle to program a VCR daily and deal with tapes, but it was a snap to set the DishPVR to record my favorite shows. And when I did find time to watch TV, more often than not I found myself turning to my PVR list of recordings and watching one of those instead of a live event.

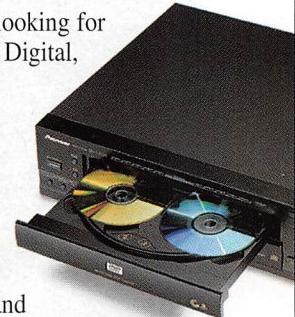
There was one "real-time" event that I checked daily however: Dish Instant Weather. You can select a home city and up to five favorites from a list of more than 1,000 U.S. cities and national parks. View current weather conditions or get a five-day forecast. Early next year, Dish Interactive Home is expected to debut with news, sports, games, entertainment, and customer support. The weather forecasts seem like a promising start.

In fact, the entire DishPVR system represents a good start for anyone looking for an introduction to satellite TV and hard-disk video recording. Its extensive customized program lists, lockout options, and ease of use make it a good choice for families. And the price is certainly right!



The Superstore that comes to your door

Whether you're looking for stereo or Dolby® Digital, a DVD player or an MP3 player, you'll find it in the Crutchfield catalog.



Its 148 pages are packed with the latest audio and video components, comparison charts and buying tips you won't find anywhere else.

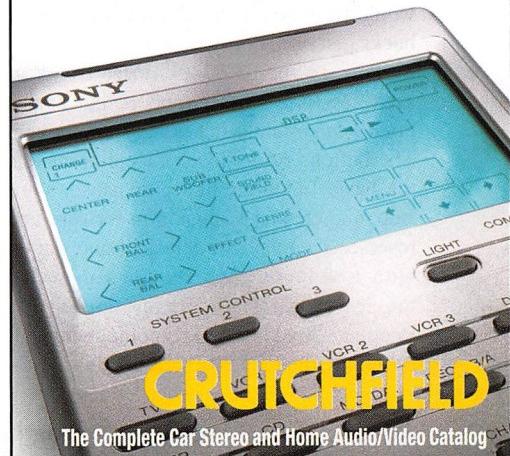
All the big brands: Sony, Bose, Harman/Kardon, Onkyo, JVC, Infinity, Polk Audio and more.

And, once you've found what you want, you'll find a fantastic shipping deal, free lifetime tech support and a 30-day Total Satisfaction Guarantee. It's never been so easy to get the features and performance you want.

Call today for your FREE catalog

1-888-802-7695

or visit www.crutchfield.com



CRUTCHFIELD

The Complete Car Stereo and Home Audio/Video Catalog



RCA

RC5240P DVD-Video Player



There's plenty of talk these days about the collapse of the Internet economy and dot.com doom in general. Even so, you can still get some incredible deals on the Web — and I'm not talking airline tickets. Case in point is RCA's RC5240P DVD player, which lists for \$199 but sells for only \$159 on the company's Web site (rca.com). For an entry-level player, it sports an impressive array of features, including component-video output, playback of MP3 files on CD-R discs, and a zoom mode with panning control. Features like these would have commanded quite a few more bucks just one short year ago.

Okay, so the RC5240P doesn't look as svelte as RCA's other models, but at this price I'm certainly not going to complain. The buttons on its black faceplate handle the basic functions like play/pause, start/stop, and chapter scan/skip in forward and reverse. There's also a headphone output with a volume knob so you can watch movies at night when everyone else is sleeping. In addition to its component-video output, the RC5240P offers up an S-vid-

eo jack and two sets of A/V outputs with composite-video connections. Both optical and coaxial digital audio outputs are also provided, ensuring compatibility with any late-model A/V receiver.

The supplied remote control is large and loaded with a fair number of rubbery buttons in different colors. Problem is, none of them are backlit. On the other hand, the buttons you're likely to use most often are differentiated by shape and within easy reach of your thumb. So when the lights go down, you should be able to figure out which button to press by touch alone. I did, once I got used to the remote's layout. The handset is preprogrammed to control RCA and ProScan TVs and can also be set up to control other brands.

Since there's nothing overly fancy about the RC5240P, setup is a cinch. First, you choose the screen type (widescreen 16:9 or standard 4:3) from the Display menu, and then you select a component- or S-video connection (the composite-video outputs are always active). Depending on whether you have a Dolby Digital or an older Pro Logic receiver, you then select bitstream or

PCM digital output from the Sound menu. The menu also has a Range option that lets you even out (compress) the dynamics of digital soundtracks for late-night viewing.

The RCA has four forward and four reverse scan modes ranging from 2x to 8x speed. Compared with other DVD players, the RC5240P offers fairly jerky motion in 2x mode, but, again, you're not shelling out big bucks for this player. The zoom button lets you close in on images with up

fast facts

KEY FEATURES

- Plays DVDs, CDs, and CD-R/RW discs with MP3 files
- Component-video output
- Zoom mode with panning control

OUTPUTS component-video, S-video, and two composite-video with stereo audio; optical and coaxial digital audio

DIMENSIONS 3 1/4 inches high, 17 1/4 inches wide, 11 3/4 inches deep

WEIGHT 11 pounds

PRICE \$199

MANUFACTURER RCA, Dept. S&V, 10330 N. Meridian St., Indianapolis, IN 46290; www.rca.com; 800-336-1900

The most powerful home theater control center in the world.



Carver C-1000
Home Theater Control Center
Featuring 1000 watts of power.*

Not without a softer side though, the new C-1000 also features an extremely sensitive tuner and Bob's exclusive Sonic Hologram Generator. Yeah, we know it's pretty hard to believe that all this can be packed into a single unit, but then again, it's a Carver. For more information call **425.335.4748**

CARVER
powerful. musical. accurate.

test report

HIGH POINTS

Low price.

Good audio and video performance.

LOW POINT

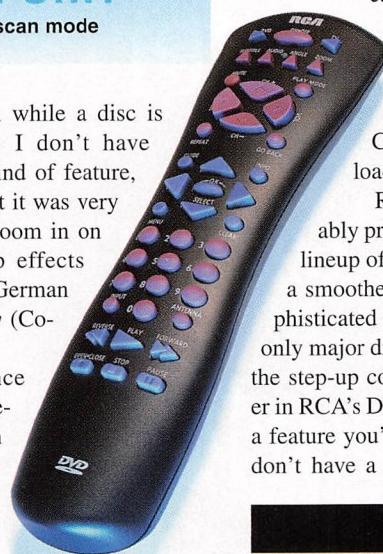
Jerky 2x scan mode

to 4x magnification while a disc is playing or paused. I don't have much use for this kind of feature, but I must admit that it was very cool being able to zoom in on the special makeup effects used in the recent German horror film *Anatomy* (Columbia TriStar).

Video performance was quite good, especially for a player in this price range. The image was sharp enough to convey the gleaming surfaces of surgical instruments and pores in the face of . . . well, let's just say a subject in one of *Anatomy*'s morgue scenes. And the player had no problems passing the disc's menacing 5.1-channel Dolby Digital soundtrack, which in this particular scene consists of circulating swells of eerie, screeching violins.

Switching from horror to melodrama, I popped the 1950s Technicolor masterpiece *Written on the Wind* into the DVD tray. The player easily rendered the rich red of bad-girl Marylee's sportscar and the lurid interior of the club where Kyle celebrates his year of sobriety with a few stiff martinis. I watched the movie on a 65-inch widescreen TV, and the image from the RCA player appeared slightly soft and lacking in contrast compared with the one from my \$800 reference DVD player. But if I'd viewed the same disc on a smaller TV, the differences would have been more subtle — assuming I could even detect them at all.

One of the added benefits of owning a DVD player is that it doubles as a CD play-



er. Playing "Packt Like Sardines in A Crushd Tin Box" from Radiohead's *Amnesiac*, the RCA did a fine job of reproducing the song's wispy textures and shifting sonic perspectives. Thom Yorke's low-key vocals also sounded impressively smooth. The RCA delivered on its promise of MP3 compatibility, providing glitch-free playback of a CD-R disc filled with downloaded music.

RCA's RC5240P is affordably priced and offers an impressive lineup of features to boot. Aside from a smoother scan mode and a more sophisticated onscreen graphic display, the only major difference I see between it and the step-up component-video-output player in RCA's DVD line is SRS TruSurround, a feature you'd only consider using if you don't have a multichannel speaker setup.



Despite its budget price, the RCA DVD player delivered every gruesome detail and menacing sound effect in *Anatomy*, a German horror movie.

So if you're looking to get into DVD without putting too big a dent in your bank account, this RCA player is an easy one to recommend.

S&V

in the lab

DVD-VIDEO PERFORMANCE

Measurements were made from a variety of DVD test discs, all through the player's composite-video output except as noted.

Maximum white-level error 0 IRE

Setup level 0 IRE

Differential gain2%

Differential phase 0.5°

Luminance frequency response

(re level at 1 MHz)

at 4 MHz -1.5 dB

at 5 MHz -1.4 dB

at 6 MHz -1.5 dB

at 6.75 MHz (DVD limit) -1.7 dB

Onscreen horizontal resolution

..... 540 lines

Pixel cropping

...left 1, right 20, top 1, bottom 4

In-player letterboxing

..... poor

Component-output level error

(Y/P_r/P_b) +2/+6.8/+3.1%

Component-output timing error

(P_r/P_b) +18/-11 nanoseconds

CD AUDIO PLAYBACK

All tests except defect tracking were made with **Sound & Vision**'s test CD-RW. Its signals contain dither, which sets limits on measured distortion and noise-level performance.

Maximum output 2.0 volts

Frequency response

20 Hz to 20 kHz +0.33, -0.11 dB

Excess noise (without/with sine tone)

16-bit (EN16) +3.95/+4.75 dB

quasi-20-bit (EN20) +20.8/+21.1 dB

Noise level (re -20 dBFS, A-wtd) -72.6 dB

Distortion (THD+N, 1 kHz)

at 0 dBFS 0.012%

at -20 dBFS 0.033%

Linearity error (at -90 dBFS) -3.0 dB

Noise modulation 1.8 dB

Defect tracking

(Pierre Verany test disc) 1,200 µm

On the test bench, the RCA player's video performance was slightly better than its audio performance. Unlike many players, it did not roll off its luminance frequency response at the highest frequencies, which is good. However, the response had already dipped by 1.3 dB at 3 MHz and stayed there through the rest of the luminance frequency range. Although these deviations from flat luminance response may seem slight, since they extend over a wide range the result is a visibly softer picture than from a player with flatter response. The right pixel-cropping value is the largest I've yet measured — it looked like the picture had been slid off to the right a bit. But on any set with overscan (which includes all direct-view and many CRT-based projection sets), this effect will usually not be noticeable except in direct comparison with a player whose image is better centered.

Audio performance was dominated by an unusually high noise level. It was actually high enough to be audible at times even with MP3-encoded material on CD-Rs as well as with music CDs. Of course, if you use the player's digital audio outputs exclusively, all the audio results are irrelevant as sound quality will be determined by the downstream equipment.

— David Ranada



At Last: Bookshelf Speakers That Sound Like Giant Towers!

Rich Warren raves, "I heard imposing monoliths but all I saw were bookshelf speakers."

— *Sound & Vision Magazine*

Definitive's amazing PowerMonitors™ have built-in powered subwoofers for a dramatic breakthrough in compact loudspeaker performance.

"Unbelievably Good" — *Widescreen Review*

If you lust after giant towers, but don't have the space, Definitive's new PowerMonitors are for you! Experts rave that with their superb imaging, breathtaking clarity and awesome bass, the PowerMonitors totally outperform all other bookshelf speakers regardless of size or price. And these compact, custom installable, ultra high-performance music and home theater speakers are easily placed in cabinets, on stands or on shelves.

Ultimate Stealth Home Theater Speakers

Definitive's extraordinary PowerMonitors sound absolutely awesome. Their built-in powered subwoofers make these compact, magnetically-shielded bookshelf superspeakers sound like giant towers. All three of our PowerMonitors (PM500 with 150-watt 8" sub @ \$425 each, PM700 with 250-watt 8" sub @ \$599 ea. and PM900 with 250-watt 10" sub @ \$799 ea.) can be used as a stereo pair for superb music reproduction. Or combine them with a matching Definitive center channel plus a pair of matching Definitive surrounds (you don't need a separate subwoofer) for the ultimate hideaway stealth home theater speaker system. It's truly another speaker revolution from Definitive!



Definitive Technology®

The Leader in High-Performance Loudspeakers®

11433 Cronridge Dr. • Owings Mills, MD 21117 • (410) 363-7148

See our dealer list on page 38



INGENIOUS:

MARKED BY ORIGINALITY, RESOURCEFULNESS, AND CLEVERNESS IN CONCEPT AND EXECUTION.

Original in concept and total in sensual satisfaction, the Integra DTR-8.2 is an entertainment experience that washes over you with sound and images of extraordinary proportion. An experience you'll be able to indulge in, and control, in virtually any room of your home. The Integra DTR-8.2 is also astonishingly flexible with THX Select Certified performance and A-Bus-ready technology – the amazingly simple, elegant alternative to conventional audio distribution. The design is nothing short of ingenious. As is your decision to own one. The Integra DTR-8.2.



Integra / 18 Park Way Upper Saddle River, N.J. 07458 / www.integraphometheater.com

Integra Division of Onkyo U.S.A.

Integra

Wharfedale

Pacific Series Home Theater Speakers



A British brand that dates back all the way to 1932, not long after the classic dynamic loudspeaker was invented, Wharfedale has lived through the periods when first radio, then 78-, 45-, and 33½-rpm vinyl discs, and now CDs have been the dominant music sources. Over the years, the company has produced dozens if not hundreds of different speaker models, evolving and advancing right along with audio itself.

Earlier this year Wharfedale introduced the Pacific Series, a mix-and-match line of affordable bookshelf and floor-standing speakers aimed at today's home theater buyer. "Pacific" seems an appropriate name given that the brand is now owned by two Chinese businessmen, and though the speakers are still designed in Britain, the new line is manufactured in Shenzhen, China. Eager to check out the venerable brand's latest offering, we assembled a surround sound system comprising two Pacific Pi-30 floor-standing speakers for the

front left/right positions, a pair of Pi-10 bookshelf models for surround-channel duties, and a Pi-Center speaker.

All three models are vented and feature a distinctive top-mounted tweeter "pod." This unusual, though not unique, touch is intended to produce more spacious, detailed sound by maintaining phase coherence between the drivers (British rival B&W has been using a similar design for years). The last piece to this speaker puzzle is the Pacific 12SB subwoofer, a down-firing, vented design that is impressively compact for a sub with a 12-inch driver.

All six speakers are finished in elegant dark-rosewood veneer — unexpected at these prices. (Several panels on my test samples were somewhat cloudy-looking — perhaps they were packed before their finishes were entirely set? — though the ones photographed for this review were fine.) All of the speakers are equipped with sturdy metal multiway binding posts, biampable in the case of the Pi-30 and Pi-10.

I began my audition by listening to the

fast facts

	Pi-30 (front L/R)	Pi-Center (center)	Pi-10 (surround)	12SB (subwoofer)
TWEETER	1-inch dome	1-inch dome	1-inch dome	—
MIDRANGE	6½-inch cone	—	—	—
WOOFER	6½-inch cone	two 5-inch cones	6½-inch cone	12-inch cone
ENCLOSURE	vented	vented	vented	vented
POWER	—	—	—	65 watts
INPUTS AND OUTPUTS	biampable multiway binding posts	multiway binding posts	biampable multiway binding posts	line-level and speaker-level inputs and outputs
DIMENSIONS (WxHxD)	8¾ x 37¼ x 13 inches	20¼ x 10½ x 9 inches	8¾ x 16¼ x 11¼ inches	14½ x 17 x 16 inches
WEIGHT	35 pounds	19 pounds	16 pounds	43 pounds
FINISH	light beech or rosewood veneer	light beech or rosewood veneer	light beech or rosewood veneer	light beech or rosewood veneer
PRICE Total: \$1,850	\$700 a pair	\$250 each	\$400 a pair	\$500 each

MANUFACTURER Wharfedale, IAG America, Dept. S&V, 180 Kerry Pl., Norwood, MA 02062; www.wharfedale.com; 877-440-0888



Projection High Definition TV Monitor



60" Plasma High Definition TV Monitor



Multimedia High Definition TV Monitor



15.1" LCD High Definition TV/Computer Monitor

test report

full-range Pi-30s on their own using a few carefully chosen CDs. The 3-foot-tall speakers initially struck me as somewhat heavy sounding. There was lots of deep bass but a bit too much upper bass. Pulling the towers out into the room — a good 4 feet from the front wall — helped smooth things out. The Pi-30s sounded rich and full (as opposed to “forward” or “analytical”), and they opened up dramatically on material like “My Need” from Janet Jackson’s *The Velvet Rope*, allowing cymbals and other percussive details to rise above the song’s powerful synth-bass line.

Well-recorded vocals sounded smooth and open — British speakers *always* seem to get this right (it must be the BBC heritage). Nevertheless, I did detect a slight upper-midrange emphasis on some voices, and even with the speakers pulled out into the room, their sound remained distinctly warm, which tended to give male vocals extra body. Treble was reasonably smooth and nicely balanced overall, and the speakers put up a deep and spatially detailed image, especially with primo stereo recordings produced without a lot of gimmickry.

I began my multichannel musings focusing on Wharfedale’s Pi-Center speaker, which sat atop my 30-inch widescreen high-def TV. Critical listening is important here because the center speaker conveys all of the dialogue as well as many of the effects and much of the music in movie soundtracks. I compared its reproduction of mono voices from movie soundtracks and radio and TV announcers with the same material reproduced by a single Pi-30 temporarily placed directly below it. The results were a bit disappointing: on male voices especially, the Pi-Center had a distinctly different tonal balance from the Pi-30 — it was “chestier” and a little nasal sounding.

The good news is that when I moved to one side or the other — 30° or so off the Pi-Center’s axis — the tonal balance more closely matched the front L/R speakers. (It’s common for center speakers that sandwich a tweeter between two woofers to



Wharfedale’s Pacific Series speakers had ample dynamics for all the pounding hooves and occasional pistol shots in *All the Pretty Horses*.

sound different off-axis.) Dialogue from well-produced DVD soundtracks was intelligible, and I was never distracted from the action by what I heard from the center speaker. But if I made a conscious effort to zero in on the Pi-Center — and after all, that’s part of my job! — its sound was not as neutral and detailed as what I’ve heard from the best center speakers.

I was also occasionally reminded of the Pi-Center’s less-than-perfect tonal balance by a sort of cupped-hands, “shouty” tinge on voices, music, and effects. With sounds that panned across the front stage — like the galloping hooves in the DVD of *All the Pretty Horses* — there were tonal shifts as they crossed the center, but again, such subtleties would be noticeable only to hyper-alert ears.

Since the Pi-30 does quite well in the bass department, I was able to get the best multichannel balance by setting my A/V receiver for “large” front left/right speakers, directing deep bass from the center and surround channels to the 12SB subwoofer. I also chose this hookup path because the 12SB sub’s electronics package does not include a high-pass crossover for its line- or speaker-level pass-through outputs. Instead, I used my receiver’s THX-standard crossover to send bass below 80 Hz to the subwoofer.

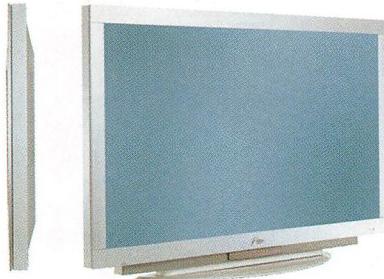
Listening to multichannel music DVDs, I was impressed by the overall dynamic quality from this suite of Wharfedale speakers. They can play loud! On the DTS label’s unusual *Studio Voodoo* 5.1-channel DVD-Audio disc (kinda Stockhausen meets world beat), the Pacific Series speakers sounded super: punchy yet warm, solidly three-dimensional, with beguiling clarity on details like the sound of the nylon-string guitars on “*Imagenes de España*.” I still found the Pi-30s a bit overenthusiastic in the upper bass, but this was at least partly caused by the acoustics of my room.

The 12SB subwoofer played low — de-



Irresistibility has never come in so many flavors. Why not discover exactly how many? Check out all of the new, unimaginably magnetic Zenith digital televisions and monitors by visiting zenith.com, or just call 1-877-9ZENITH.

zenith 
DIGITIZE THE EXPERIENCE.™



60-inch HDTV Monitor Plasma Display

**Wowie! Zowie! Holy Compression Of Digital Technology Into A Space
No Wider Than The Spine Of A Paperback!** Prepare yourselves, citizens.

Zenith is behind an array of digital TVs, monitors and other home entertainment devices you will be powerless to resist. Digital marvels like this new ultra-thin, 60-inch HDTV Monitor Plasma Display. Visit zenith.com or call 1-877-9ZENITH. Quick! Before it's too late!

zenith 

DIGITIZE THE EXPERIENCE.™



The RX-DP10VBK utilizes an independent direct power supply for each of seven channels, resulting in improved channel separation and superior clarity.

All the home's a stage with the RX-DP10VBK's special multi-room/multi-source capability, that allows you to enjoy multiple audio or video sources in different rooms simultaneously. And, the radio frequency LCD multi-brand remote will let you control it all from anywhere in your home.

Log on to www.jvc.com for more information.



CUSTOM
ELECTRONIC
DESIGN &
INSTALLATION
ASSOCIATION

test report

livering ample bass well south of 35 Hz—and plenty loud. When I pushed it really hard, the sound became a bit “furry” from port noise, but only at very high volumes and with bass-rich material. Pushed harder still, the sub would clack (there’s no protective bass-limiting circuitry in its onboard amplifier). That said, the Wharfedale setup had more than ample dynamic output for even demanding movie sound, such as the wideband pounding of the long mustang-breaking sequence in *All the Pretty Horses*.

Turning to some over-the-top yet fun movie DVDs, like *The Matrix*, I was just as impressed with the Wharfedale suite’s overall performance. This system has bass depth and power to spare, and it was able to play loud and clear at movie-theater volumes—even in a large room. And the speakers don’t seem particularly power-hungry: my 150-watt-per-channel receiver never broke a sweat even at extreme, louder-than-cinema volumes.

One oversight I must mention is that only the Pi-Center is magnetically shielded, which is something to keep in mind if

HIGH POINTS
Powerful, full-range front L/R speakers.
Good extension from 12-inch sub.
Solid performance for the price.

LOW POINTS
Pi-30s may sound too warm in some rooms.
Midrange emphasis from center speaker.
Subwoofer lacks high-pass filtering.

you have a small space that requires putting the front L/R speakers close to the TV.

All things considered, this selection of speakers from Wharfedale’s Pacific Series represents excellent value. For less than \$2,000, you get a capable, dynamic system including a good 12-inch subwoofer. And you can lower the ticket a bit by substituting one of the company’s less expensive Pacific models for the Pi-30. Wharfedale may not be as widely known here on these shores as some of its British comrades, but the Pacific Series could change that. And deservedly so.

S&V

in the lab

FREQUENCY RESPONSE (at 2 meters)
front left/right.....37 Hz to 15.0 kHz ±6.5 dB
center.....87 Hz to 11 kHz ±3.9 dB
surround.....70 Hz to 13.2 kHz ±4.7 dB
subwoofer.....48 Hz to 125 Hz ±2.6 dB

SENSITIVITY (SPL at 1 meter with 2.8 volts of pink-noise input)
front left/right.....90 dB
center.....90 dB
surround.....90 dB

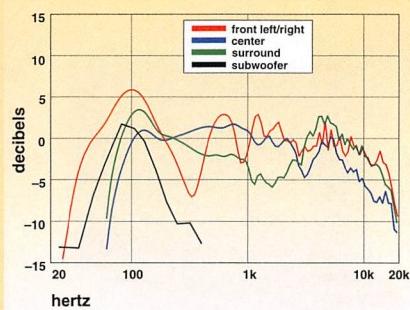
IMPEDANCE (minimum/nominal)
front left/right.....3.3/5 ohms
center.....2.8/6 ohms
surround.....3.5/7 ohms

BASS LIMITS (lowest frequency and maximum SPL with limit of 10% distortion at 2 meters in a large room)
front left/right.....40 Hz at 90 dB SPL
center.....50 Hz at 80 dB SPL
surround.....62 Hz at 62 dB SPL
subwoofer.....25 Hz at 69 dB SPL
92.6 dB average SPL from 25 to 62 Hz
108 dB maximum SPL at 62 Hz

Center had limited high-frequency output. The response notch at 3 kHz is evident in the curve and markedly worsened at wider radiating angles. The Pi-10 surround speaker had a swaybacked response shape that was uniform at all radiating angles except that high frequencies fell very rapidly at angles greater than 15°.

Bass limits for the 12SB subwoofer were measured with it set to maximum bandwidth and placed in the optimal corner of a 7,500-cubic foot room. In a smaller room users can expect 2 to 3 Hz deeper extension and up to 3 dB higher sound-pressure level (SPL) from the subwoofer. The 12SB extended down to 25 Hz and could produce 108 dB SPL at 62 Hz, but its SPL capability fell off at more than 12 dB per octave below that frequency. The crossover knob has no frequency markings, and there was a 7-dB level change over full rotation.

— Tom Nousaine



All of the response curves in the graph are weighted to reflect how sound arrives at a listener's ears with normal speaker placement. The Pi-30 front L/R speaker had a substantial floor-bounce dip at 300 Hz and considerable irregularity between 500 Hz and 3 kHz. However, the moderately falling bass to treble balance was good, and response was uniform over our ±30° measurement window. The Pi-

Bravo!



If you appreciate a remarkable performance, JVC's new audio/video control receiver deserves a standing ovation. With dual Motorola 24-bit DSP chips, the RX-DP10VBK delivers an amazing 300 MIPS of combined power to process even the most demanding surround sound, while maintaining superior resolution and minimal noise. And JVC's unique independent power supply for each channel maximizes channel separation and clarity. Now you can always have the best seats in the house.

JVC

Excite your senses.

Yamaha

CDR-HD1000 CD/Hard-Disk Recorder



When José, the Fed Ex guy, rings my doorbell, the transaction is well scripted. He gives me the box containing the Next Thing to Review, and I give him the box containing the Last Thing I Reviewed. One glance at the Next Thing box tells me which link in the audio/video chain I'll be scrutinizing for the next few weeks. Like I said, it's highly choreographed.

So when I saw this Yamaha box, I thought, "Cool, a CD recorder — they're always fun." Little did I know just how cool it would be. Not only does this beauty burn write-once CD-R and rewritable CD-RW discs, but it also contains a 20-gigabyte (GB) hard-disk drive that lets you edit your recordings before burning them to disc as well as save recorded playlists so you can make multiple copies.

A quick glance at the CDR-HD1000's tidy-looking front panel might persuade you that it's simply another CD recorder. There are all the controls you'd expect to see. For example, a button selects the opti-

cal or coaxial digital or the analog inputs, and a knob adjusts the analog-input recording level. You use a jog wheel to select the recording mode, call up various menus on the display, adjust the digital recording level (± 12 dB), and make other settings. The Finalize button is used to write the Table of Contents (TOC) to a finished disc so it can be played in conventional machines. (But not all players can read all recordable discs. Some DVD players balk at CD-Rs while handling CD-RWs just fine. And while virtually all CD players can play CD-Rs, most older models don't like CD-RWs.) You'll also find all the usual transport controls as well as a headphone jack with its own volume knob. The controls all have a crisp, taut feel that gives a user confidence.

It's another button, labeled HDD for hard-disk drive, that unlocks the CDR-HD1000's secret identity. The hard disk can store up to 30 hours and 40 minutes of CD-format audio without data compression. Even better, the hard-disk drive's data-transfer rates are fast. Ideally, you can copy a CD to the hard disk at 10x speed,

and you can copy data from the hard disk to a CD-R at 8x and to a CD-RW at 4x speed. (Blank discs are rated at different transfer speeds, however, so not all of them can achieve these transfer multiples.)

With so much storage capacity, you need some way to organize the hard disk's contents. Cleverly, the Yamaha recorder

fast facts

KEY FEATURES

- Records and plays CD-R and CD-RW discs
- Built-in 20-GB hard-disk drive
- Copies to hard disk at up to 10x speed, from hard disk at up to 8x speed
- Serial Copy Management System

INPUTS/OUTPUTS

Analog stereo, coaxial and optical digital (one input and one output each)

DIMENSIONS 17½ inches wide, 4½ inches high, 16¼ inches deep

WEIGHT 18½ pounds

PRICE \$999

MANUFACTURER Yamaha Electronics USA, Dept. S&V, 6660 Orangethorpe Ave., Buena Park, CA, 90620; www.yamaha.com; 800-492-6242

HDTV IS LIKE BEING THERE.

BE THERE.

HIGH DEFINITION UPGRADEABLE TELEVISIONS*.

PRECISION ENGINEERED BY MITSUBISHI.

THE MASTERS OF HOME THEATER TECHNOLOGY.

* Coupled with our high definition receiver, all models will display full 1080i True HDTV™ performance.
Visit our website to Register and Win at www.mitsubishi-tv.com
©2000 Mitsubishi Digital Electronics America, Inc.

 **MITSUBISHI**
THE BIG SCREEN COMPANY™
^
Digital

test report

IN-POSSIBLE?

Is it possible? Can a design team achieve truly exceptional high-end sound to meet the challenges imposed by walls and ceilings?

Paradigm® Reference SA-Series...
In-Possible was never in question.

Check with your dealer—if you're not getting Paradigm® Reference, you're not getting the best.

PARADIGM REFERENCE
THE ULTIMATE IN HIGH-END SOUND FOR MUSIC AND HOME THEATER™

www.paradigm.com

In the US, contact AudioStream, MPD Box 2410, Niagara Falls, NY 14302 T • (905) 632-0180
In Canada, contact Paradigm, 205 Annaglen Blvd., Mississauga, ON L5T 2V1 T • (905) 564-1994
Copyright © 2001 Paradigm Electronics Inc. and Bavan Corp.

uses a hierarchy of virtual “discs” (up to 999) and “tracks” (up to 99 per disc, just like a real CD). In addition, tracks from different discs can be organized into a playlist called an “album” (up to 999). Finally, a collection of tracks, discs, and albums is called a “group.” If a disc contains CD Text, that’s also copied, but graphics and other nonaudio data are left behind. Finally, audio from CD-ROMs and DVDs cannot be copied.

The HD1000 accepts digital audio data with sampling frequencies of 32, 44.1, 48, and 96 kHz, but they’re all converted to the 44.1-kHz, 16-bit CD format. The digital output is always 44.1-kHz and 16-bit. The back panel has the connections you’d expect on a CD recorder. It also sports an RS-232C jack, but that’s used only for factory diagnostics, and a fan to keep the chassis interior cool. The supplied remote control, most notable for its bland design, duplicates most of the front-panel functions and adds an alphanumeric keypad.

Although the CDR-HD1000 contains a hard-disk drive, it is not a computer, so it can record only on “music use” blank CDs. These discs contain header information that’s slightly different from that on “data” CDs and also cost more. The added cost is a royalty meant to compensate artists, record companies, songwriters, and music publishers for presumed losses due to home recording of copyrighted material. In addition, as the law requires of all consumer digital audio recorders, the HD1000 adheres to the Serial Copy Management System (SCMS): you can digitally copy a digital original, like a music CD, but you cannot digitally copy the copy. For example, if you digitally copy a CD’s contents to the hard disk, then later want to copy the same contents to a blank CD, the transfer must be analog — meaning that the output from the hard disk goes through a cycle of digi-

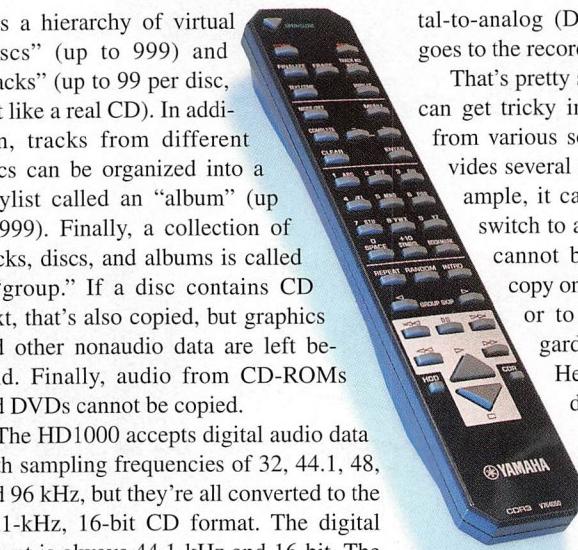
tal-to-analog (D/A) conversion before it goes to the recorder’s inputs.

That’s pretty straightforward, but things can get tricky in a compilation of tracks from various sources. The recorder provides several copying methods. For example, it can be set to automatically switch to analog recording if a track cannot be copied digitally, or to copy only digitally enabled tracks, or to make analog copies regardless of the SCMS flags.

Here’s another copyright-induced technical wrinkle: when you’re duplicating a CD or burning a compilation, you can do a “digital move,” which transfers data from the hard drive to a blank disc even if it’s copy-protected, then automatically erases it from the hard drive.

Even with SCMS restrictions, the CDR-HD1000 offers terrific recording flexibility. You can record from an external source to either the hard drive or a CD-R or CD-RW, from a CD to the hard drive, or from the hard drive to a CD-R or CD-RW. You can also duplicate a CD, but you have to copy it to the hard drive first since the HD1000 has only one disc tray. That might sound complicated, but in practice operation is extremely simple. In fact, you can even select a synchronized mode so that recording (to either the hard disk or a blank CD) starts automatically when the source starts playback. Here’s another nice feature — you can set the CDR-HD1000 to record for a timed duration and automatically create track markers at prescribed intervals. Unfortunately, it has no facilities for unattended timer-controlled recording, but you might be able to finesse this with a suitably versatile programmable remote control.

Once you’ve recorded data to the hard drive, you can edit the contents of virtual discs and tracks using straightforward, intuitive commands that are much like those



A LOVE SUPREME

PARADIGM® REFERENCE



The love affair between the listener and a recorded piece of music is a special bond. It takes an exceptional kind of speaker to reproduce the music you love.

Paradigm® Reference designers understand this bond and are relentless in developing speakers that make this stirring emotional connection possible. Sound reproduction is stunningly natural, detailed and clear. Imaging is open and spacious with pinpoint localization. And, since high-end speakers should also move you visually, these advanced technologies are housed in beautifully sleek, elegant enclosures.

Whether for music or home theater, there is no more sonically coherent choice than Paradigm® Reference speaker systems – Art embracing science, science embracing art... A Love Supreme.

"... most certainly a serious high-end contender, and a formidable one ... if tonal neutrality is at the top of your list of priorities for speaker performance, and you want a speaker that can play loud without sounding stressed, then you really must listen to the Reference Studio/100."

—Robert Deutsch, *Stereophile*, Vol. 23 No.6, on the Studio/100



www.paradigm.com

In the US, contact AudioStream MPO Box 2410, Niagara Falls, NY 14302 T • (905) 632-0180 • In Canada, contact Paradigm 205 Annagem Blvd., Mississauga, ON L5T 2V1 T • (905) 564-1994 • Copyright ©2001 Paradigm Electronics Inc. and Bavan Corp.



More Than a Decade of Excellence!

In 1999, Paradigm® was honoured with a one-of-a-kind award from the distinguished publication **Inside Track*** for rating #1 in price/value for an unprecedented **10 Consecutive years!** After repeating again in 2000 and 2001, this has now been extended to **12 years!**

*An annual, independent, nationwide survey of consumer electronics specialist retailers and custom installers.

test report

HIGH POINTS

- Innovative design.
- Easy to use.
- Bit-accurate copies.
- Superb sound quality.

LOW POINTS

- Bland remote control.
- No facilities for unattended timer-controlled recording.

used in MiniDisc recorders. For example, you can erase, combine, or divide discs and tracks, create track fade-ins and fade-outs, name and rename discs and tracks, and so on.

To check out the recorder's duplication prowess, I loaded the Dire Straits CD "On Every Street" (a 60-minute, 20-second recording) into the disc drawer and selected the Duplicate mode. This mode's default settings are digital-domain copying, 0-dB record level, and "Best Effort" copy speed (the fastest speed allowed by the copy conditions and disc type). I hit the Record button, and high-speed copying started, ran for about 6 minutes, then stopped, at which point the display advised me to "Change Discs." I swapped the original disc for a blank CD-R, and copying started automatically as soon as the drawer closed. Eight minutes later, the player finalized the disc, and I was the proud owner of a legal copy of "On Every Street."

During the transfers from CD to hard disk and back again, the front-panel display kept me fully informed, showing the data — with track numbers and times — "moving" from one medium to another. The other recording modes operate about as simply as the duplication process, and the editing features are a snap, too. Here's a nice touch: the player displays the used/available recording capacity of the hard drive in hours and minutes instead of gigabytes or megabytes.

Of course, a fundamental requirement for any CD recorder is the ability to make audibly identical copies. I listened carefully to the original Dire Straits disc and my copy of it, and I could hear absolutely no difference. Both sounded superb (testifying to the quality of the player's D/A converters). To verify that the recorder was making bit-accurate clones in its digital copying mode, I duplicated a 5.1-channel DTS-encoded CD of Sting's "Brand New

Day." The copy played fine through my DTS decoder, which couldn't occur unless it was bit-accurate, which also explains why my copy of the two-channel Dire Straits CD sounded the same as the original.

I had selected my vintage, well-worn Dire Straits disc precisely to test how the recorder would handle the inevitable errors; it seemed to do just fine, and the copy I made didn't have any glitches. However, the Sting dupe did have an audible dropout. When I tried it again at a slower copy speed, all was well. One final note: the CDR-HD1000 has more than a few computer circuits onboard, and such circuits are notorious for causing noise induced by radio-frequency interference (RFI). In this case, they're well shielded, and I didn't notice any RFI problems while using the deck in my home theater system.

When a company introduces an innova-

tive product, it's customary to put a nice, round number in its name — like "1000." And the prefix CDR-HD also hints at the deck's normal application and most special feature. So CDR-HD1000 really says it all: this is one innovative CD-R/RW recorder that stands apart from the pack with its own hard-disk drive. Sure, for a similar price you could buy a personal computer with a CD burner that can perform all of the same copying tricks and do much more besides. But with its ease of use, drop-in integration with the rest of your A/V components, and beyond-reproach fidelity, the Yamaha CDR-HD1000 stands apart from any PC or Mac, too. If you have a supply of "music use" blanks and you want to rip, edit, burn, and play in full-fi mode, this extremely impressive recorder is ready to rock. Next time José stops by, he might not get a Last Thing I Reviewed box.

S&V

in the lab

DIGITAL-INPUT RECORDING

Bit-accurate at CD-standard 44.1-kHz sampling rate.

ANALOG-INPUT RECORDING

All analog-input measurements were made during playback from the hard-disk drive through the digital output. Since dubbing from the drive to a CD is bit-perfect, the measurements also represent how a recorded CD will play back on a theoretically "perfect" CD player. For all measurements except input sensitivity, the record-level control was set to a point that just lit the overload light with a 2-volt input. This produced a -20-dBFS recording from a 200-millivolt input, our reference level for the noise measurement.

Input sensitivity (to produce a recorded 0-dBFS level, record-level control full up) 428 mV

Distortion (THD+N, 1 kHz)

at 0 dBFS 0.004%

at -20 dBFS 0.003%

Linearity error (at -90 dBFS) -0.45 dB

Noise level (A-wtd) -72.6 dB

Noise modulation <0.25 dB

Frequency response

20 Hz to 20 kHz +0.02, -0.19 dB

CD PLAYBACK, ANALOG OUTPUTS

All measurements were made with **Sound & Vision**'s test CD-R. The test signals all contain dither, which sets limits on measured distortion and noise performance.

Output level for 0 dBFS 2.3 volts

Distortion (THD+N, 1 kHz)

at 0 dBFS 0.0026%

at -20 dBFS 0.017%

Linearity error (at -90 dBFS) -0.2 dB

Noise level (A-wtd) -75.4 dB

Excess noise (without/with sine tone)

16-bit (EN16) +0.15/+0.15 dB

quasi-20-bit (EN20) +7.4/+7.4 dB

Noise modulation <0.25 dB

Frequency response

20 Hz to 20 kHz +0.1, -0.1 dB

Defect tracking

(Pierre Verany test disc) 1,500 µm

This is one of very few CD-based devices we've tested whose playback performance came close to the theoretical limits of the format (some DVD players do so, too). In particular, in our most difficult playback test, quasi-20-bit excess noise (EN20), the Yamaha joins a very select group of players measuring less than +10 dB (0 dB would be perfect), indicating extremely accurate playback of so-called "20-bit" CDs. You'll get this kind of performance when playing back a CD or with digital dubs made to the hard-disk drive as long as the original signal is 16-bit and doesn't go through sampling-rate conversion. This is 16-bit PCM audio at its finest.

Though superb for a CD recorder, the analog-input recording performance was not quite in the same league, with slightly poorer noise levels. Also, the red overload-indicator light came on only about 0.1 dB away from the start of signal clipping, indicating very little leeway when setting recording levels. The DAC mode, which lets you use the deck's digital-to-analog converters for external inputs you want to play but not record, is best reserved for 16-bit, 44.1-kHz signals. Fed true 24-bit data, its noise and distortion behavior wasn't much better than the equivalent of 17-bit resolution.

— David Ranada

Bell'O™

HOME THEATER FURNITURE



ATC-2101

AVSC-2102

The WU-2100 Home Theater System is undoubtedly one of the most exciting pieces recently introduced by Bell'O, elegantly combining metal and glass with a real wood trim -- another fine addition from the deCarolis Collection.

The strikingly beautiful audio tower (ATC-2101) is designed to accommodate at least ten audio/video components. The rounded glass shelves, which provide a truly custom look, immediately catch the eye. Measuring 25"w x 60"h x 24"d the ATC-2101 is truly a worthwhile addition to your home theater.

Creatively designed as a companion piece for the ATC-2101 or to stand alone, the AVSC-2102 is an excellent choice for up to a 40" Direct View TV and at least four components. Dimensions are 43"w x 23"h x 23"d.



AVSC-2103

The AVSC-2103, also a companion piece to the ATC-2101, accommodates up to a 40" Direct View TV and at least six components. Dimensions are 43"w x 30"h x 23"d.

Bell'O™

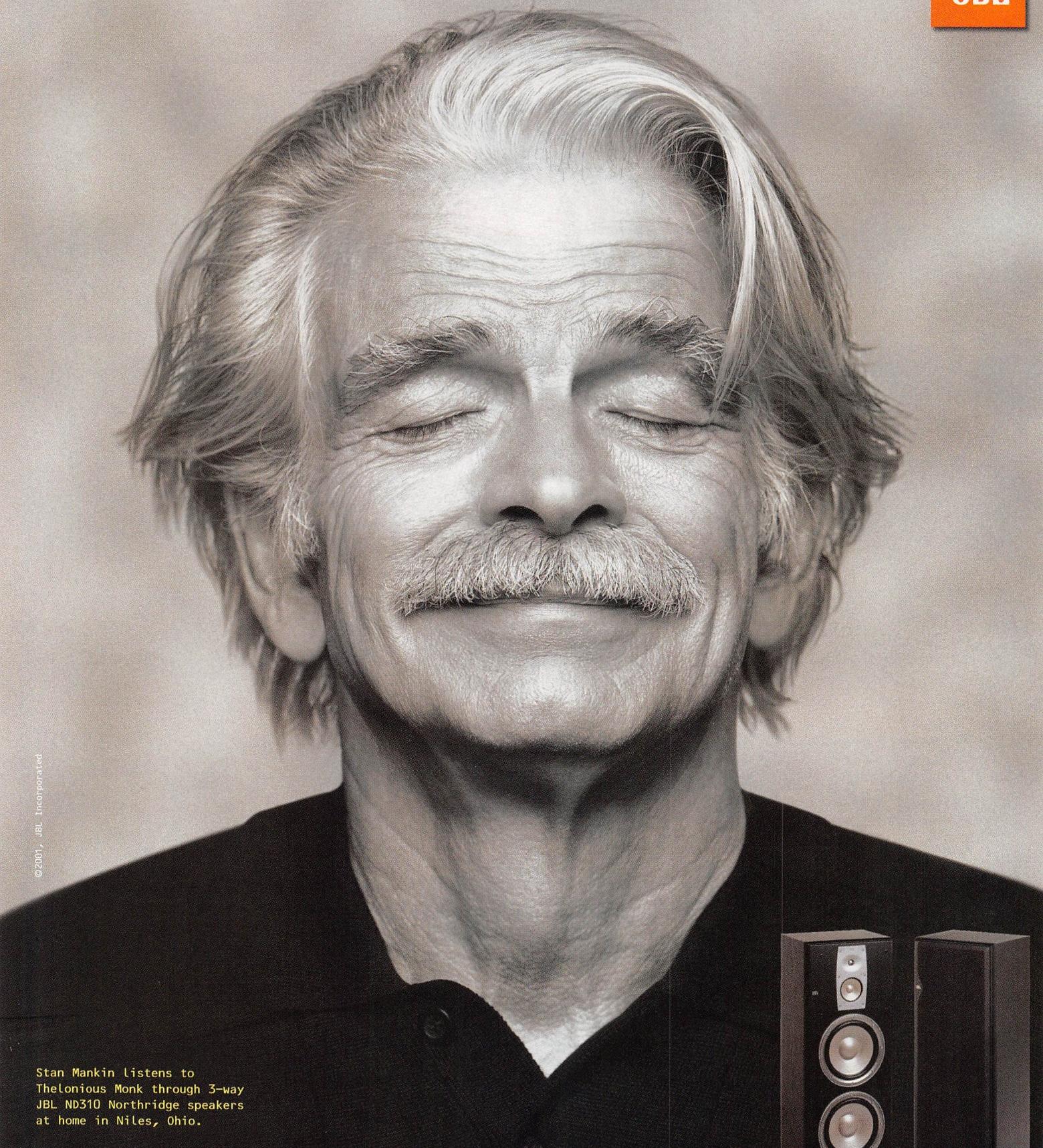
INTERNATIONAL, LLC, 711 GINESI DRIVE, MORGANVILLE NJ 07751, TEL. 732-972-1333, FAX 732-536-6482

In Canada: TEAC Canada Ltd., TEL 905-890-8008, FAX 905-890-9888

www.bellointl.com • E-mail: sales@bellointl.com

PRO SOUND COMES HOME.™

JBL



© 2001, JBL Incorporated
Stan Mankin listens to
Thelonious Monk through 3-way
JBL ND310 Northridge speakers
at home in Niles, Ohio.

Great JBL sound is heard in recording studios, concert halls, nightclubs and movie theaters around the world. Like the Hit Factory. Sydney Opera House. The Roxy. And Virgin Cinemas. Great JBL sound is also available for the home. The Northridge™ Series home theater speakers are ideal for movies and music. www.jbl.com or 1-800-336-4JBL.

H A Harman International Company

Outlaw Audio

Integrated Controlled Bass Manager (ICBM)



Every time I review one of the new high-resolution audio players, either DVD-Audio or Super Audio CD (SACD), I go ballistic because none of them performs bass management correctly for the new discs — and most don't do it at all! You might think a player has this capability when you go into its setup menu and choose between "large" and "small" speakers. But these controls affect playback of Dolby Digital or DTS material *only*. High-resolution audio emerges naked from the player's multichannel analog outputs. Since the analog multichannel *inputs* on A/V receivers don't have bass management either (their "large"/"small" settings also affect only Dolby Digital, DTS, and — sometimes — CD playback), you're likely to get full-range material hitting every one of the main speakers in your system when you play the new multichannel media.

By "full-range" I mean, containing bass below 100 Hz. If your home theater speaker system — like most — consists of a subwoofer and small satellites (and "small" means any speaker whose woofer is less than 10 inches in diameter), the satellites will probably not be able to handle full-range DVD-Audio signals. Either they won't reproduce the lows at all, shifting the program's tonal balance, or they'll distort them in the attempt — possibly badly when the levels get high. In the worst-case

scenario, very small satellite speakers could be nuked by humongous deep-bass peaks. That's why you need a proper bass-management system — to strip the deep bass out of the channels feeding speakers that can't handle it and "redirect" it to the speakers that can, which usually means the subwoofer or possibly the front left/right speakers.

Fortunately for multichannel-audio enthusiasts and even movie buffs, Outlaw Audio's ICBM, for Integrated Controlled Bass Manager (clever), is the *most* proper bass-management system I've encountered. More versatile than *every* other consumer-level bass-management system I know of — whether in an add-on component or built into a digital surround receiver, preamplifier, or processor — the ICBM amounts to an overwhelming first strike against the almost unbelievable oversight of the manufacturers of high-resolution equipment. It is also quite reasonably priced for the functions it performs.

If you're extremely critical about sound quality, you should seriously consider the ICBM even if you already have digital bass management in your system and want only to play DVD-Video discs and CDs, forgoing the high-res wonders, such as they are, of DVD-Audio and SACD. You might want to supplant your "native" bass management with the ICBM's because the ICBM lets you set the bass-stripping high-

pass crossover frequency independently for each channel. A few high-end processors also permit that, but instead of giving you a single choice of "large" or "small" speaker size, the ICBM lets you select the optimal crossover point, between 40 and 120 Hz, using its front-panel dials (the manual lists appropriate settings for different woofer sizes). You might benefit from using the ICBM's 60- or 40-Hz setting even if you have largish main speakers — especially if your subwoofer is also large or otherwise extremely capable.

Another feature I like a lot is the ICBM's provisions for stereo subwoofers. While it's true that our ears can't localize

fast facts

KEY FEATURES

- Bass redirection for all five main surround sound channels, plus back surround
- Left/right front and surround bass can be separately redirected for stereo subwoofers

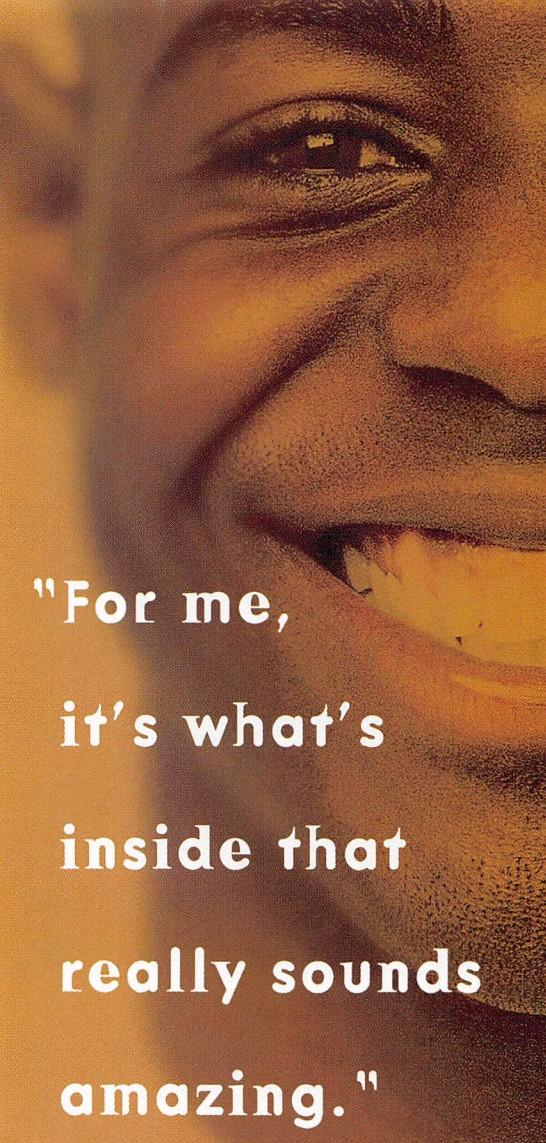
INPUTS/OUTPUTS front left/center/right, surround left/center/right, LFE analog line-level inputs; front left/center/right, surround left/center/right, subwoofer left/right analog line-level outputs

DIMENSIONS 17½ inches wide, 1¾ inches high, 7 inches deep

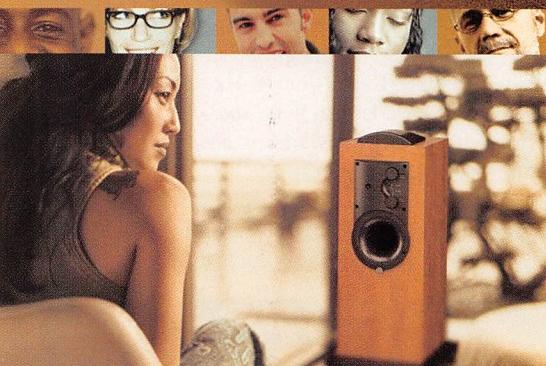
WEIGHT 5 pounds

PRICE \$249 (sold via Web site only)

MANUFACTURER Outlaw Audio, Dept. S&V, 18 Denbow Rd., Durham, NH 03824; www.outlawaudio.com; 866-688-5297



"For me,
it's what's
inside that
really sounds
amazing."



Before you hear athena's breakthrough modular speaker system, listen to how they sound on the inside. Teteron dome tweeters produce clear, powerful and genuinely accurate highs. MOSFET amplifiers drive athena's subwoofers to achieve a rich, intuitive bass response. And resonance is minimized with Medium Density Fiberboard cabinets. athena. Sounds amazing, inside and out.

Create your own sound

athena TECHNOLOGIES®
3641 McNicoll Avenue
Toronto, Ontario
Canada M1X 1G5
www.athenaspeakers.com



© 2001 athena TECHNOLOGIES®

test report

HIGH POINTS

Extremely versatile bass management.
Superb audio performance.
Excellent manual.

LOW POINTS

No channel-level adjustments.
No speaker-distance adjustments.

deep-bass sounds, that doesn't mean the low-frequency phase differences from channel to channel that creep into stereo and multichannel recordings of acoustic music — differences that help to create a sense of space — aren't worth trying to reproduce. The ICBM lets you do this if you use two subwoofers because bass from the left and right front and surround channels is properly redirected to each. For example, a superb Teldec DVD-Audio recording of Bach pipe-organ music played by Ton Koopman sounded extraordinarily realistic, though when I had listened to it previously over the same speaker system without proper bass management, it sounded rather anemic. Previously, all of the bass in the main channels was lost, and all I heard down there was the bass recorded in the mono LFE (low-frequency-effects) channel. But with the ICBM in place, the sound was so rich and "right" that it provided the best possible argument for the musical value of multichannel recordings.

The refinements don't stop with stereo subwoofer outputs (which are switchable to mono if you have only one subwoofer). It's little appreciated, even in the music industry, that both DVD-Audio and SACD are six-channel systems, not simply 5.1-channel. What in the Dolby Digital and DTS world is the limited-bandwidth (thus ".1") LFE channel has in the high-res world been turned into a full-range channel, meaning that we could have music recordings with three discrete surround channels as well as three in front (but no LFE).

Of course, some movies on DVD-Video (like *Gladiator*) already have quasi- or actual 6.1-channel Dolby Digital Surround EX or DTS-ES soundtracks. The ICBM has a separate input for a back surround channel (Outlaw calls it a center surround), and unlike some 6.1-channel A/V receivers, it treats the back surround to the same crossover-frequency selection and bass redirection as the other main channels. That makes the device future-proof against the

day when the music business finally discovers that the back surround channel is useful (some music producers don't even like using the front center channel).

There are other refinements, some of which may be important for your setup, but you can learn about these from the manufacturer's Web site. More important to me is the ICBM's simple hookup: you connect it between your DVD or SACD player and your receiver or preamplifier — or, to use it for other sources as well, between your receiver's preamp and power-amp sections or between a separate preamp and power amp. The excellent manual (in plain English with good diagrams) is easy to follow, and the ICBM's lab performance was also excellent.

The only areas where I found the ICBM deficient are its lack of channel-balancing controls (this function has to be performed elsewhere in the system) and its inability to compensate for different speaker distances (the ICBM is an analog device, and this function must be done digitally). Otherwise, the strategic planners in Outlaw Audio's war room are right on target with this superbly designed component. It is the first product to abrogate what seems to be an ABM (anti-bass-management) treaty among high-res-audio manufacturers, and it is the one ICBM I'd like to see proliferate. — D.R.

in the lab

Except for the subwoofer-output slope measurement, the numbers shown below are for the left front channel, but performance of the other main channels was similar.

Crossover slopes

12 dB/octave rolloff below crossover point

Frequency response.....from -3 dB at crossover point to -0.3 dB at 96 kHz

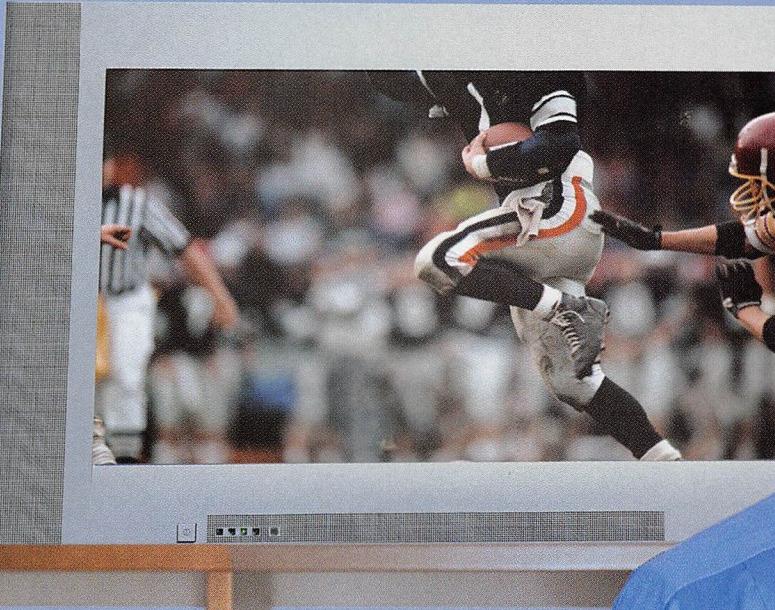
Noise level (A-wtd, re 200-mV input).....-94 dB

Subwoofer output low-pass filter slope
(normal setting).....-12 dB/octave rolloff
above crossover point

The measured performance of the ICBM was superb. Noise levels were equal to or better than those I've measured for DVD-Audio and SACD players, which means that the ICBM should be transparent to such signals, and the frequency response was essentially dead flat up to the highest frequencies those media can provide. The subwoofer outputs did not overload with simulated worst-case signals from a DVD-Audio player. The high-pass crossover points measured 4 to 5 Hz higher than indicated on the front panel, but there's nothing in these numbers to cause hesitation.

— D.R.

**every year you get
ONE CHANCE
to see where the entire
consumer technology
industry is headed**



get there first



2002 International CES® JANUARY 8-11, 2002 • LAS VEGAS, NEVADA USA

The Consumer Electronics Show is a four-day crash course in the industry's best, brightest and most promising technologies. Digital, wireless, interactive, broadband—you can try them all, learn their appeal and get a sneak peak at the hottest technologies on the horizon. Think of it this way: In consumer technology, everything that's coming is here. Your competition knows that. So where are you going to be?

2002 International CES®

Your Source for Workstyle
and Lifestyle Technology™

CEA

CES IS SPONSORED, PRODUCED
AND MANAGED BY CEA

REGISTER NOW! • WWW.CESWEB.ORG/GENERAL

FULL FLAVOR



PARLIA

OUT OF THE CLEAR BLUE



MENT



DISTINCTLY SMOOTH

Lights: 9 mg "tar," 0.7 mg nicotine - Full Flavor: 15 mg "tar," 1.1 mg nicotine av per cigarette by FTC method.

The amount of "tar" and nicotine you inhale will vary depending on how you smoke the cigarette.

For more information about PM USA and its products, visit www.philipmorrisusa.com or call 1-877-PM USA WEB.

© Philip Morris Inc. 2001

SURGEON GENERAL'S WARNING: Smoking By Pregnant Women May Result in Fetal Injury, Premature Birth, And Low Birth Weight.

DVD'S MOST WANTED



You can't swing a lasso in your local electronics megastore without hitting a bargain-price DVD player that gets all the basic things right. But if you want the very best sound and picture quality that DVD has to offer, *plus* the newest and coolest technology, you'll have to skip the rope and focus instead on those players that take advantage of the most exclusive DVD features. Any "most wanted" list would include things like multiple-disc storage and playback, a top-quality progressive-scan video output, DVD-Audio or Super Audio CD (SACD) playback, and DVD recording. Unfortunately (or perhaps fortunately for your credit limit), no single player provides *all* of these features. So here's a guide to help you decide which ones belong on your personal "most wanted" list.

DVD Megachangers

Why waste your precious relaxation time manually changing discs when a machine can do it for you? Buy a DVD megachanger that can hold 300 or more discs, and you can sort through your entire collection without ever touching a single disc. And since DVD players can also play CDs, you can use your changer to hold your CD collection as well. Deposit your discs in the machine, program in the title and track information, and you can throw your jewel boxes and space-hogging storage racks away. And like CD changers, DVD changer mechanisms don't degrade A/V performance one bit.

Designs differ, but most megachangers use a circular rack that holds discs vertically and spins around to bring your selection to the playing position. Access time is important. You don't want a changer that takes so long to

switch from one disc to another you could have done it faster by hand. Also, make sure it displays all of the information necessary to identify which disc is which and that you can easily enter title and track info in its memory. Many changers let you create your own playlists and group discs by musical genre and other categories.

AIM FOR THE RIGHT FEATURES AND RIDE HOME WITH A BIG REWARD

by Ken C. Pohlmann

Progressive-Scan Video Output

DVD movies offer impressive video quality — especially compared with videotape. All DVD-Video players have composite- and S-video outputs, and many include a regular component-video output, which delivers the signal via three cables. Going from composite- to S-video can bring a dramatic improvement in picture quality, while moving up to component video usually offers more subtle improvements. But if you want the ultimate that the DVD format can provide, look for a player with a *progressive-scan* component-video output. (To learn how progressive scanning works, see "Improving Your Image," May 2001.)

Different players use different means to generate a progressive-scan signal. Some merely double the number of existing scan lines, while the better ones perform what videophiles call 2:3 pulldown to compensate for the different frame rates of video (30 frames per second, or fps) and film (24 fps). As you'll see from our DVD player test reports, different techniques are used to accomplish 2:3 pulldown, and some players perform better than others. If you look closely using a properly set up TV, you'll find that a good progressive-scan player will provide smooth images without the ragged edges on diagonals and other blemishes produced by lesser players.

To reap the benefits of a progressive-scan output, however, you'll need an enhanced-definition TV (EDTV) or a high-definition (HDTV) set or monitor that can display signals in at least the 480p (the "p" is for progressive-scan) format. If you already own an EDTV or HDTV display, you'll want to seriously consider getting a progressive-scan player.

DVD-Audio and Super Audio CD

If music is as important to you as movies, consider a DVD-Video player that can also play DVD-Audio discs or Super Audio CDs. The catalog is small but growing, and some first-rate titles have already appeared that suggest the tremendous potential of high-resolution multichannel music. If you've ever felt that CD sound was lacking something, or that even the best Dolby Digital or DTS soundtracks are less than ideal, DVD-Audio and SACD will likely persuade you that your ears have met their match. There really aren't any practical limitations to potential playback quality with either format. Instead, any limitations lie in how well the recording itself is produced.

To prevent people from making digital copies, both DVD-Audio and SACD players deliver only analog audio

Listings compiled by Peter Pachal

What's so cool about it?

- Progressive-scan output
- DVD-Audio playback
- Megachanger
- DVD recorder
- SACD playback

MANUFACTURER	Model	Cool features		Price	1/1	1/1	1	■ /—	■	■	■	—	—	—	—	—	Additional features	
		■	■															
Apex Digital 909-930-0132 www.apexdigitalinc.com	AD-7701	■	■	■	\$349	1/1	1/1	1	■ /—	■	■	■	—	—	—	—	Multichannel SACD playback.	
	AD-800	■			\$249	1/1	1/1	1	■ /—	■	■	■	—	—	—	—		
	AD-3601	■	■		\$199	1/1	1/1	1	■ /—	■	■	■	—	—	—	—		
Denon 973-396-0810 www.denon.com	DVM-4800	■	■		\$1,199	1/1	2/2	1	■ / ■	■	■	■	■	—	—	—	5-disc changer; bass management for Dolby Digital, DTS, and DVD-Audio; karaoke functions.	
	DVD-2800	■			\$799	1/1	1/1	1	—/—	■	■	■	■	■	—	—	—	
	DVD-1600	■	■		\$499	1/1	1/1	1	■ / ■	■	■	■	■	—	—	—	Bass management for Dolby Digital, DTS, and DVD-Audio.	
Harman Kardon 800-422-8027 www.harmankardon.com	DVD 50	■			\$599	1/1	1/1	1	—/—	■	■	■	■	—	—	—	5-disc changer; CD/MP3 Text display; bookmarks; headphone jack with level control; 4-speed smooth scan; backlit remote.	
Integra 800-225-1946 www.integraphometheater.com	DPS-9.1	■	■		\$1,800	2/2	2/2	2	■ / ■	■	■	■	—	*	*	*	THX Ultra-certified; RS-232 port.	
	DPT-1	■			\$1,200	1/1	1/1	1	—/—	—	—	—	—	*	*	*	301-disc megachanger; RS-232 port.	
	DPS-7.2	■			\$800	2/1	2/2	2	■ / ■	■	■	■	■	—	✓	—	THX Ultra-certified; RS-232 port; universal remote.	
JVC 800-252-5722 www.jvc.com	XV-FA95GD	■	■		\$500	1/1	1/1	1	■ / ■	■	■	■	■	—	—	—	7-disc changer; backlit universal remote.	
	XV-F85GD	■			\$450	1/1	1/1	1	■ / ■	■	■	■	■	—	—	—	As above.	
	XV-SA75GD	■	■		\$400	1/1	1/1	1	■ / ■	■	■	■	■	—	—	—	Universal remote.	
	XV-S65GD	■			\$350	1/1	1/1	1	■ / ■	■	■	■	■	—	—	—	As above.	

All information supplied by the manufacturers. Manufacturers' quoted prices; dealer prices vary. * Manufacturer did not supply information.

signals over six discrete channels, which means using six cables, a DB-25 computer cable, or a cable with a DB-25 connector at one end and six RCA plugs on the other. Therefore, your receiver or preamp must have a six-channel analog audio input to accommodate the high-resolution feed.

Somewhere down the road, you can expect to see a variety of affordable players that can handle multichannel DVD-Video, DVD-Audio, and SACDs. In the meantime, buying a DVD-Video player that can also play either DVD-Audio or SACD discs is a good way to check out audio's future.

DVD Recording

If you really want to be the first on your block with the coolest toy, consider a DVD recorder. These decks burn MPEG-2 digital video along with two-channel Dolby Digital audio onto 4.7- or 9.4-gigabyte (GB) discs. The 9.4-GB discs can hold up to 9 hours of program material at the lowest quality level.

Recordable DVDs use either the write-once DVD-R format, which is playable in many if not all DVD-Video players, or in one of three different rewritable formats —

DVD-RAM, DVD-RW, and DVD+RW. At press time, five standalone DVD recorders had been announced or were on the market, including the Panasonic DMR-E20 (DVD-R and DVD-RAM, reviewed in the October issue).

DVD-RAM discs can be recorded, erased, and played *only* in component DVD-RAM recorders or compatible DVD players and computer drives. While DVD-RW and DVD+RW discs are said to be playable in many DVD-Video players, they're not guaranteed to play in all. Some of the incompatibility problems could eventually be solved by DVD Multi recorders that can handle more than one rewritable format.

DVD recorders have analog video inputs so you can do time-shift recording of TV shows just as you would with a VCR. But their blindingly fast data-transfer speeds (up to 22 megabits per second) and random access (no rewinding!) allow them to do things VCRs never could. For example, you can set bookmarks, find selections instantly, and play them in any order. Panasonic's DMR-E20 even lets you simultaneously record one show on a DVD-RAM while playing back another one you previ-

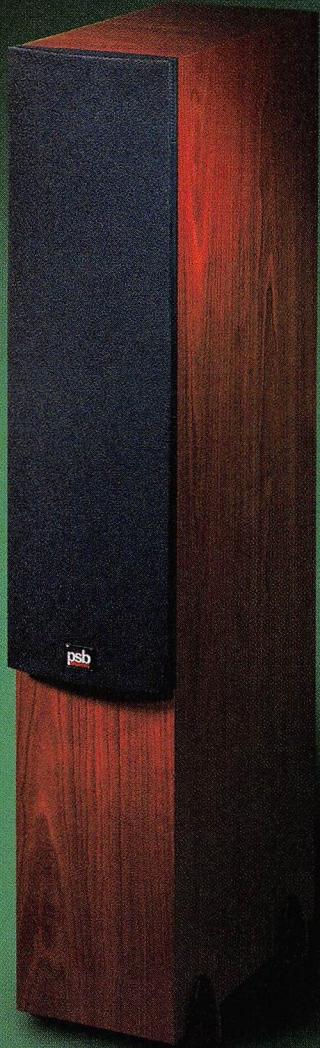
ously recorded on the same disc. Of course, like VCRs, DVD recorders won't let you copy DVD-Video movies.

The Choice Is Yours

With these features in mind, study the listings on these pages, and then head to the store to check out the models on your "most wanted" list. (You can't be sure a player has your name on it until you actually put it through its paces.) Some of the players weren't available at press time, but the manufacturers planned to have them in stores by early November. All quoted specs were supplied by the manufacturers.

As with any cutting-edge technology, you'll probably have to pay a little extra for the perks we've highlighted, but they'll not only provide the best DVD performance available — they'll help protect you from obsolescence. The best reason to buy a player sporting one or more of these features, however, is so you can enjoy its capabilities now rather than later. They definitely make a good thing even better.

Player listings begin above and continue on pages 94 and 96.



T H E I M A G E S E R I E S

"...another PSB success story."

Sound & Vision

"...exceptional value and rare musicality."

Stereophile Guide to Home Theater

psb
SPEAKERS

1 888 772 0000

www.psbspeakers.com

What's so cool about it?

■ Progressive-scan output

■ DVD-Audio playback

■ Megachanger

■ DVD recorder

■ SACD playback

MANUFACTURER

Model

Cool features

Price

Optical/coaxial digital audio outputs

Composite/S-video outputs

Component-video outputs

Analog 5.1-channel output (Dolby Digital/DTS)

Plays CD-Rs

Plays CD-RWs

Plays discs with MP3 files

Plays DVD-R discs

Plays DVD-RAM discs

Plays DVD-RW discs

Additional features and notes

MANUFACTURER	Model	Cool features	Price	Optical/coaxial digital audio outputs	Composite/S-video outputs	Component-video outputs	Analog 5.1-channel output (Dolby Digital/DTS)	Plays CD-Rs	Plays CD-RWs	Plays discs with MP3 files	Plays DVD-R discs	Plays DVD-RAM discs	Plays DVD-RW discs	Additional features and notes
Kenwood 800-536-9663 www.kenwoodusa.com	Sovereign DV-5900M	■ ■ ■ ■	\$1,500	1/1	2/2	1	✓/✓	✓	✓	✓	✓	—	—	403-disc megachanger; dual-side playback; bass management for Dolby Digital, DTS, and DVD-Audio; RS-232 port; daisy-chain ability.
	Sovereign DV-5700	■ ■	\$1,200	1/1	2/2	1	✓/✓	✓	✓	✓	✓	—	—	5-disc changer; bass management for Dolby Digital, DTS, and DVD-Audio.
	Sovereign DV-5050M	■ ■	\$1,000	1/1	2/2	1	—/—	✓	✓	✓	✓	—	—	403-disc megachanger; dual-side playback; RS-232 port; daisy-chain ability.
Konka 800-298-9751 www.konkausa.com	KD3100U	■ ■	\$199	0/1	1/1	1	✓/✓	✓	✓	✓	✓	—	✓	Progressive-scan output lacks 2:3 pulldown.
	KD-2800U	■ ■	\$169	0/1	1/1	1	✓/✓	✓	✓	✓	✓	—	✓	
Marantz 630-741-0300 www.marantz.com	VC8100	■ ■	\$1,400	1/2	1/1	1	—/—	✓	—	—	*	*	*	301-disc megachanger; THX Ultra-certified.
	DV7100	■ ■	\$900	1/1	2/1	1	—/—	✓	✓	—	*	*	*	Progressive-scan output lacks 2:3 pulldown.
	DV6200	■ ■	\$650	1/1	1/1	1	—/—	✓	✓	✓	*	*	*	
	VC5200	■ ■	\$650	1/1	1/1	1	—/—	✓	✓	✓	*	*	*	5-disc changer; 3-D virtual surround sound.
Mitsubishi 800-332-2119 www.mitsubishi-tv.com	DD-8020	■ ■ ■	\$475	1/1	1/1	1	✓/—	✓	✓	✓	—	—	—	
	DD-6020	■ ■	\$375	1/1	1/1	1	—/—	—	—	—	—	—	—	
NAD 781-784-8586 www.nadelectronics.com	T571	■ ■	\$799	1/1	1/1	1	—/—	✓	✓	✓	—	—	—	5-disc changer; CD/MP3 Text display
Onkyo 800-229-1687 www.onkyousa.com	DV-S939	■ ■ ■	\$1,800	2/2	2/2	2	✓/✓	✓	✓	—	*	*	*	THX Ultra-certified; RS-232 port; backlit universal remote.
Panasonic 800-211-7262 www.panasonic.com	DVD-H2000	■ ■ ■	\$3,000	1/2	0/2	1	✓/✓	✓	✓	—	—	✓	—	Test-pattern generator; virtual surround sound; dialogue enhancer; CD Text display; smooth scan; backlit remote.
	DMR-E20	■ ■	\$1,500	1/0	2/2	1	—/—	✓	✓	—	✓	✓	—	Records DVD-R and DVD-RAM; time shifting; VCR Plus; variable bit rate, 6-hour EP mode; simultaneous playback and record; universal remote.
	DVD-RP91	■ ■ ■	\$800	1/1	2/1	1	✓/✓	✓	✓	✓	—	✓	—	Bass management for Dolby Digital and DTS; virtual surround sound; dialogue enhancer; CD Text display; smooth scan; backlit universal remote.
	DVD-RP56	■ ■	\$300	1/*	*/*	1	—/—	✓	✓	✓	*	*	*	Virtual surround sound; smooth scan.
Parasound 415-397-7100 www.parasound.com	D 1	■ ■ ■	\$5,000	1/2	1/1	1	✓/✓	✓	✓	✓	✓	✓	✓	4-inch front-panel video screen; hardware upgradable; DVI output; backlit universal learning remote.
	D 2	■ ■ ■	\$2,500	1/1	1/1	1	✓/✓	✓	✓	✓	✓	✓	✓	As above; no DVI output.
Philips 800-531-0039 www.philips.com	DVDR1500	■ ■ ■	\$2,999	2/1	2/1	2	—/—	✓	✓	—	—	—	—	Records DVD+RW; IEEE 1394 port; 4 recording-quality modes; backlit universal learning remote.
	SACD1000	■ ■ ■	\$1,999	1/0	2/1	1	—/—	✓	✓	—	—	—	—	Multichannel SACD playback.
	DVDR1000	■ ■ ■	\$1,999	2/1	2/1	2	—/—	✓	✓	—	—	—	—	Records DVD+RW; IEEE 1394 port; 4 recording-quality modes; universal remote.
	DVDQ50	■ ■	\$499	1/1	2/1	2	✓/—	✓	✓	✓	—	—	—	
	DVD972CH	■ ■	\$399	1/1	2/1	2	—/—	✓	✓	✓	—	—	—	5-disc changer.
	DVD953AT	■ ■	\$299	1/1	2/1	2	✓/—	✓	✓	✓	—	—	—	

All information supplied by the manufacturers. Manufacturers' quoted prices; dealer prices vary. * Manufacturer did not supply information.

See Bob Rock.

The new Sunfire *True Subwoofer* by Bob Carver has received reviews that are redefining the subwoofer industry.

There has never been a subwoofer like it!
*There will never be a subwoofer like it!**

*It's a small eleven inch square bass cube,
and it shakes the walls
and rattles the rafters.
It has its own built-in
two thousand, seven
hundred watt amp!*

Trust Bob.
It Rocks!



"The True Subwoofer is an achievement on par with the space shuttle and the twinkie."

—Al Griffin
Home Theater, Feb. 97



"Talk about floor shaking bass...turned up to maximum level, I don't think there was anything in the house that wasn't shaking, including the concrete foundation!"

"Don't, I repeat, don't even think about purchasing another subwoofer without giving the Astonishing True subwoofer a listen."

—Joseph M. Cierniak
The Sensible Sound, Issue # 60

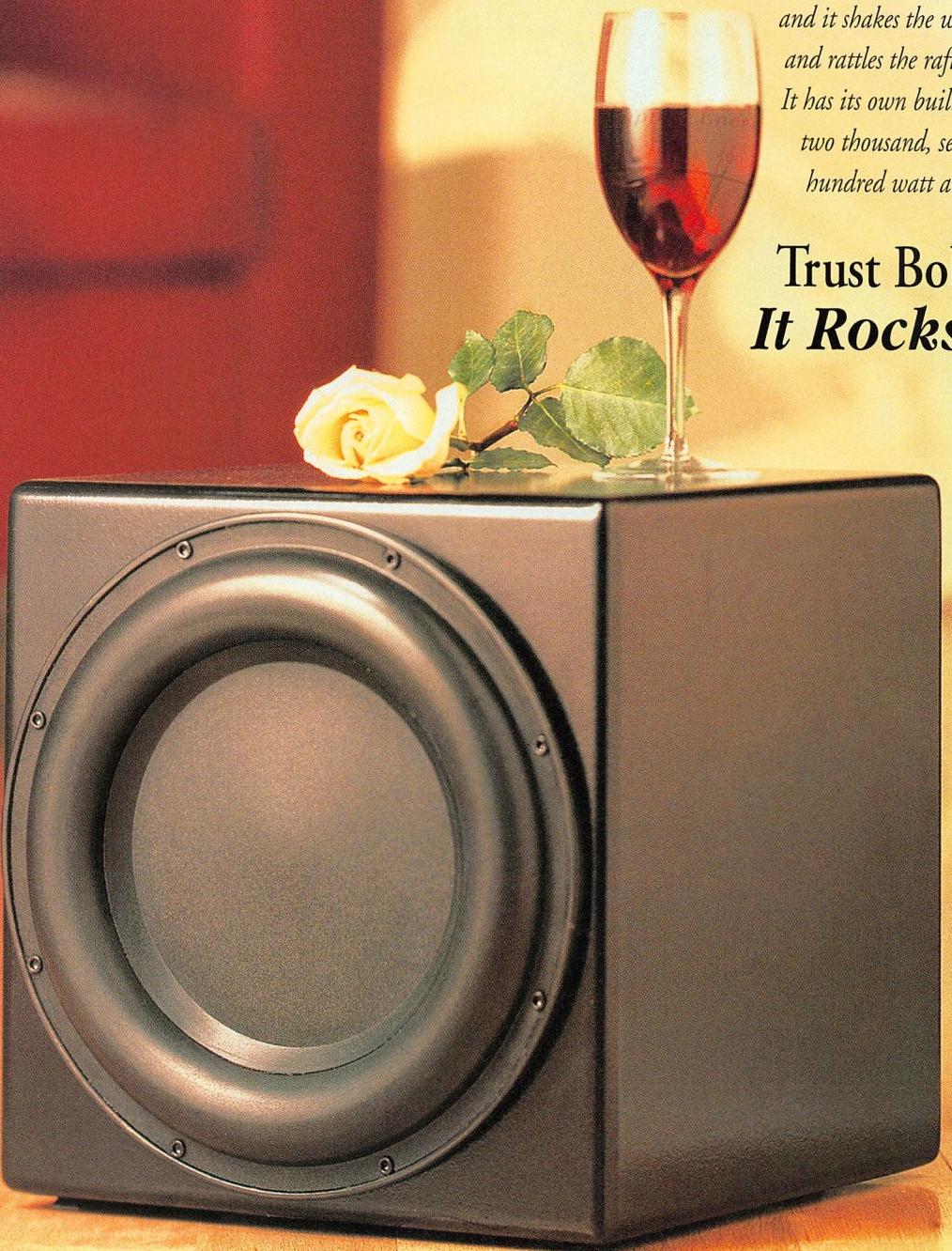


"The lowest, flattest, deepest bass I have EVER heard or measured."

—Julian Hirsh
Stereo Review, Dec. 96

*Strictly speaking: for 20 years until patent expires.

For additional information on Sunfire, call or write to
Sunfire Corporation, PO Box 1589 Snohomish, WA 98290
(425) 335-4748 • Tech Notes: Flat to 18 hz. Powered by 2700 watts.



www.sunfire.com

Bob Carver's
Sunfire
from his mind ... and soul

What's so cool about it?

- Progressive-scan output
- DVD-Audio playback
- Megachanger

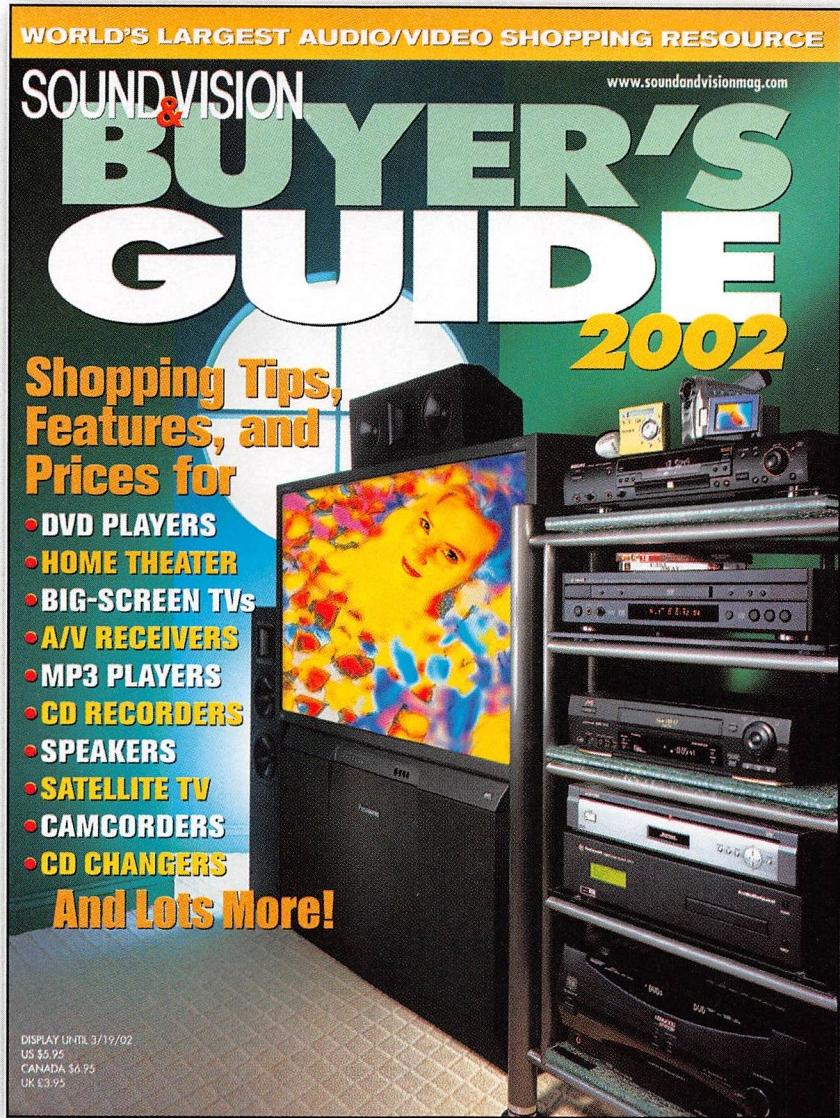
- DVD recorder
- SACD playback

MANUFACTURER

	Model	Cool features	Price	Optical/coaxial/digital audio outputs	Composite/S-video outputs	Component-video outputs	Analog 5.1-channel output (Dolby Digital/DTS)	Plays CD-Rs	Plays CD-RWs	Plays discs with MP3 files	Plays DVD-R discs	Plays DVD-RAM discs	Plays DVD-RW discs	Plays DVD+RW discs	Additional features and notes
Pioneer 800-746-6337 www.pioneerelectronics.com	DV-AX10	■ ■ ■	\$5,999	1/1	2/2	2	✓/✓	✓	✓	—	✓	—	✓	—	2-channel SACD playback; CD Text display; bookmarks; zoom; champagne-gold finish; backlit universal learning remote.
	DVR-7000	■ ■ ■	\$2,800	1/1	1/1	1	—/—	✓	✓	—	✓	—	✓	—	Records DVD-R and DVD-RW; VCR Plus; time shifting; disc labeling; thumbnail chapter creation; DVI input; universal learning remote.
	DV-38A	■ ■ ■	\$2,000	1/1	2/2	2	✓/✓	✓	✓	—	✓	—	✓	—	THX Ultra-certified; universal learning remote.
	DV-F07	■ ■ ■	\$1,300	1/1	1/1	1	—/—	✓	✓	—	✓	—	✓	—	301-disc megachanger; onscreen disc management; computer-keyboard input; universal learning remote.
	DV-F727	■ ■ ■	\$1,100	1/1	1/1	1	—/—	✓	✓	—	✓	—	✓	—	As above, basic remote.
	DV-37	■ ■ ■	\$1,000	1/1	1/1	1	—/—	✓	✓	—	✓	—	✓	—	Universal learning remote.
	DV-444	■ ■ ■	\$449	1/1	1/1	1	—/—	✓	✓	✓	✓	—	✓	—	Virtual surround sound.
RCA 317-587-4450 www.rca.com	RC6001P	■ ■ ■	\$299	1/1	1/1	1	✓/✓	✓	✓	✓	—	—	—	✓	Zoom; universal remote.
Rotel 978-664-3820 www.rotel.com	RDV 1080	■ ■ ■	\$1,499	1/1	1/1	1	✓/✓	—	—	—	—	—	—	—	Virtual surround sound; zoom; bookmarks; universal remote.
Samsung 800-726-7864 www.samsungusa.com	DVD-R2000	■ ■ ■	\$1,999	1/1	2/2	2	✓/✓	✓	—	✓	—	✓	—	—	Records DVD-RAM.
	DVD-P701	■ ■ ■	\$299	1/1	2/1	1	✓/✓	✓	—	✓	—	—	—	—	Universal remote.
	DVD-P401	■ ■ ■	\$249	1/1	1/1	1	✓/✓	✓	—	—	—	—	—	—	—
Sony 800-222-7669 www.sony.com	DVP-S9000ES	■ ■ ■	\$1,499	1/1	2/2	1	—/—	—	—	—	—	—	—	—	2-channel SACD playback; universal remote.
	DVP-NS900V	■ ■ ■	\$999	1/1	2/2	1	—/—	✓	✓	—	✓	—	✓	✓	Multichannel SACD playback; backlit universal remote.
	DVP-CX870D	■ ■ ■	\$699	1/1	2/2	1	✓/✓	—	—	—	*	*	*	*	301-disc megachanger; universal remote.
	DVP-CX860	■ ■ ■	\$499	1/1	2/2	1	—/—	—	—	—	—	—	—	—	As above.
	DVP-NC650V	■ ■ ■	\$349	1/1	2/2	1	—/—	✓	✓	—	✓	—	✓	✓	5-disc changer; multichannel SACD playback; virtual surround sound; universal remote.
	DVP-NS700P	■ ■ ■	\$299	1/1	2/2	1	—/—	✓	✓	—	—	—	—	—	Universal remote.
	DVP-NS500V	■ ■ ■	\$299	1/1	2/2	1	—/—	✓	✓	—	✓	—	✓	✓	Multichannel SACD playback; virtual surround sound; universal remote.
Toshiba 800-631-3811 www.toshiba.com	SD-9200	■ ■ ■	\$1,500	1/1	1/1	1	✓/—	✓	✓	—	✓	—	—	—	N-2-2 virtual surround sound; universal remote with joystick.
	SD-5700	■ ■ ■	\$400	1/1	1/1	1	✓/—	✓	✓	✓	✓	—	—	—	Silver chassis; N-2-2 virtual surround sound.
	SD-3755	■ ■ ■	\$400	1/1	1/1	1	—/—	✓	✓	✓	✓	✓	—	—	As above.
	SD-4700	■ ■ ■	\$300	1/1	1/1	1	✓/—	✓	✓	✓	✓	✓	—	—	N-2-2 virtual surround sound.
	SD-3750	■ ■ ■	\$250	1/1	1/1	1	—/—	✓	✓	✓	✓	✓	—	—	As above.
Yamaha 800-492-6242 www.yamaha.com	DVD-S1200	■ ■ ■	\$999	1/1	2/1	1	✓/✓	✓	✓	—	*	*	*	*	Virtual surround sound for speakers and headphones.
Zenith 847-391-7000 www.zenith.com	DVD5591	■ ■ ■	\$350	1/1	1/1	1	✓/—	✓	✓	✓	—	—	—	—	Virtual surround sound.
	DVD2381	■ ■ ■	\$200	1/1	1/1	1	✓/✓	✓	✓	✓	—	—	—	—	As above with zoom.

All information supplied by the manufacturers. Manufacturers' quoted prices; dealer prices vary. * Manufacturer did not supply information.

All The Gear



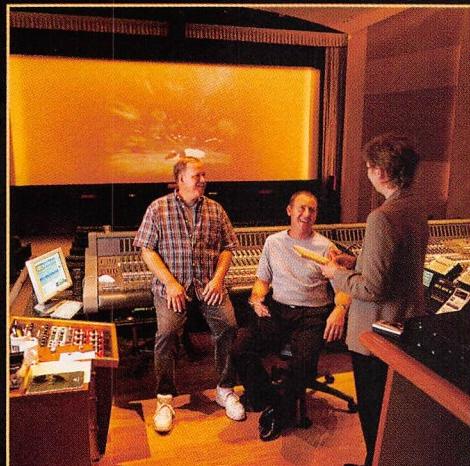
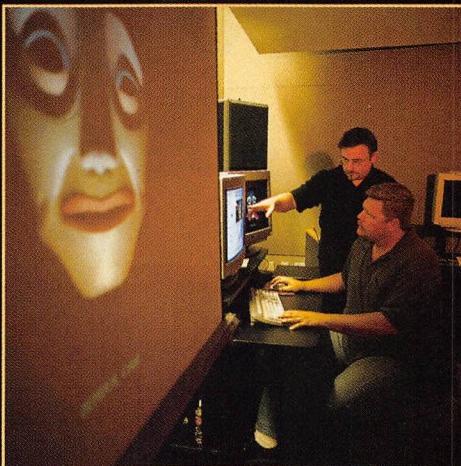
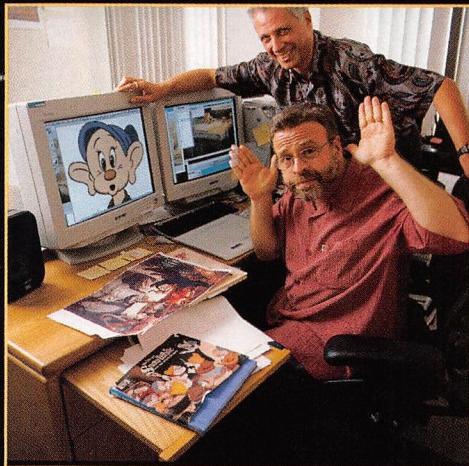
One Stop

THE ULTIMATE RESOURCE™

On Newsstands Now!
Or call 800-544-6748 To Order

The masterminds behind *Snow White's* revival: Bob Chapek (left), president of Buena Vista Entertainment, and Chris Carey, senior VP of DVD productions.

SNOW



WHITE LIVES!

An exclusive behind-the-scenes look at how Disney turned the classic film into a deluxe DVD . . . by Laura Evenson

The one that started it all" — that's how Disney Studios describes its first animated feature, *Snow White and the Seven Dwarfs*, the film that proved the naysayers wrong back in 1937 by drawing millions of people into theaters to watch an 83-minute cartoon. Walt Disney's groundbreaking film paved the way for all the beloved features that followed, from *Pinocchio* and *Fantasia* to *Beauty and the Beast* and *The Lion King*, and became the foundation of his fabled empire.

Hoping that the film will work its considerable magic on a new generation of viewers, the studio designated *Snow White* as the first of its classics for DVD release (see the review on page 128). Slated to hit store and cyber shelves October 9, it will launch the Platinum DVD series, with one Disney favorite to be released each October over the next decade.

Rather than just give the film a pristine transfer to disc, the studio is using this release to rethink how it approaches the DVD format. Just as Walt himself staked the future of his studio on the success of *Snow White*, the studio is betting this DVD will distinguish Disney as a trailblazer in the new format.

"I was 7 years old when the movie was released, and I remember the emotion surrounding it," said Roy E. Disney, the son of Walt's brother and long-time business partner, Roy O. Disney. "In the Disney family it was a tremendous event. If Walt had chosen to go on making short subjects, we probably would still be okay, but *Snow White* was such an enormous leap of faith about the medium of animation. No one believed a feature-length animation could be made, that it wouldn't be just a string of gags. *Snow White* showed how we could use animation to express emotions and character."

"Now that DVD as a medium has exploded on us in the last few years," he told me in the avuncular style of Walt himself, "the digital

technology has given us the ability to reproduce exactly what was intended for the color and sound. And it's important that we're looking at the original work in the way it was intended to be seen."

Snow White in the 21st Century

The responsibility for bringing *Snow White* into the new millennium, and for showing that Disney can hold its own with the innovative DVDs that have been coming out of other studios, fell on the shoulders of Chris Carey, senior vice president of DVD productions for Buena Vista Home Entertainment — the marketing, sales, and distribution arm for Disney DVDs and videocassettes. Carey is the driving creative force behind the \$30 two-disc set. He was also my guide on a behind-the-scenes tour of the people and places that played key roles in the creation of the new DVD.

As he slid into his tan BMW at the end of Mickey Avenue on the Disney lot, Carey flashed the grin of a man about to unveil a better mousetrap. "From [Disney CEO] Michael Eisner on down, it's been a priority to make the *Snow White* DVD great in every way," Carey said.

"We wanted to make sure it's something people will enjoy for a long time to come — that it will remain fun and entertaining. The Platinum releases are going to be where we bring out the biggest, best, and most impressive things we have."

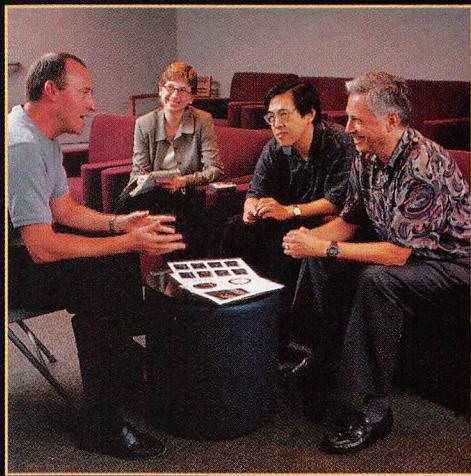
Like most DVDs, the Platinum discs will feature plenty of extras. *Snow White* offers several, including a fun, if slow-moving, *Dopey's Wild Mine Ride* game, and a star-studded *Disney Through the Decades* timeline that takes viewers on a journey through the studio's history.

Snow White also marks a series of firsts. It will be the first Disney disc to feature a song recorded by a major artist specifically for a DVD, as Barbra Streisand lends her vocal prowess to a new 5.1-channel recording of the classic "Some Day My Prince Will



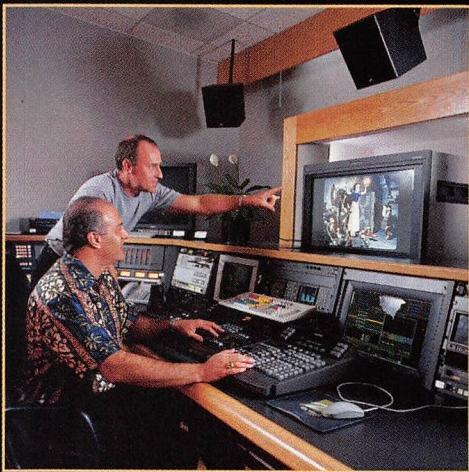
PHOTOS BY JOHN SAWICKY; FILM IMAGES COURTESY THE WALT DISNEY CO.

Facing page, from bottom left: Ed Wexler (seated) and Stan Deneroff show how they converted existing artwork for the *Dopey's Wild Mine Ride* DVD game; James Stapp (seated) and Eamonn Butler create digital animation of the Magic Mirror, which serves as the DVD's "host"; the author (right) talks to Terry Porter and Chris Carey about restoring the film's sound.



Chris Carey and Laura Evenson (above) talk with vice president of brand marketing Gordon Ho and Stan Deneroff (far right) about how the Magic Mirror is used to help immerse viewers in the DVD.

Below, Carey directs telecine colorist Mitch Drickman on applying the final touches to *Snow White's* visual restoration.



Come." It will be the first to offer celebrity-guided tours of the disc's contents, with hosts including Roy E. Disney and Angela Lansbury. And it will be the first to use a patented process that eliminates a lot of the scratches, pits, and dust flecks that have accumulated on the film print as well as grain from the original negative. Finally, it will be the first to serve up an animated host, in the guise of the movie's Magic Mirror.

Dwarf Power

The tour that lay ahead included everything a wannabe Mouseketeer could hope for — meetings with the key creative figures who collectively conjure the Disney magic and a peek at the state-of-the-art equipment and restoration methods. Standing in front of the Disney headquarters, looking at the happy sight of Sneezy, Grumpy, Dopey, and all the other dwarfs who serve as its literal and figurative pillars, it was easy to imagine the *Snow White* DVD sailing off successfully into a fairy-tale sunset. But it will actually face some pretty stiff competition, premiering the same day as *The Godfather* DVD Collection and just a few days before the October 16 worldwide DVD release of *Star Wars: Episode I — The Phantom Menace*.

I asked Carey if he was worried about these rival discs. "Well, I bet ours is better than theirs," he said with a laugh. Growing more serious, he added, "But I don't know. We'll have to see what they've done."

The *Snow White* DVD absorbed the better part of Carey's life for the past two years as he coordinated people in dozens of departments. Most recently, it cut short a vacation with his family in Australia. "We're redoing the animation of the Magic Mirror in 32 languages," said Carey by way of explanation. "There's a lot left to do," he said as he steered the BMW toward the facility where the movie's color was digitally restored.

Brighter Tomorrows

Carey doesn't betray the pressure he must feel to sprinkle a little pixie dust on the Magic Kingdom. When we arrive at Vidfilm International Digital in Glendale, he doesn't hesitate to slap the linen-clad back of Bob Chapek, who as president of Buena Vista Entertainment is one of the bigger cheeses within the Mouse House.

"Our division has been extraordinarily successful," Chapek said, adding that four of the five top-selling video titles from the past year belong to his division. "*Snow White* is such a revolutionary disc that it will be a new pacesetter for the rest of the industry as everyone else tries to leapfrog what we do.

And it's really important for Disney as a company, because this title sets expectations for future Platinum titles. We're very proud of the restoration of the audio and video for this movie. No one has seen this film look this good since the original animators."

Chapek's statement speaks volumes, given that the film has gone through several restorations (see "Snow White's Digital Makeover," facing page). Carey displayed a before-and-after sequence in the telecine bay. "See how washed out the colors are?" he said, pointing to *Snow White's* butter-colored skirt and the walls of the dwarfs' cottage. Telecine colorist Mitch Drickman flipped a switch, and the colors brightened. "Now see how much more vibrant that looks," Carey said.

But even state-of-the-art cleaning and color correction present problems. "Once the color was corrected, we saw that with contrast came a sharpening of the lines around the characters," said Carey. To get rid of those coloring-book outlines, the settings for the corrections were changed to soften the effect, and the entire film was reprocessed.

Roy Disney explained how the goal was not to make the DVD look "better" than the original. "Instead, technology has given us the ability to reproduce exactly what was intended in terms of the color, tones, and degrees of brightness," said Disney, who is vice chairman of the Walt Disney Company and chairman of Walt Disney Feature Animation.

The Sound of Magic

In a building on the Disney lot near the intersection of Dopey Drive and Mickey Avenue, Terry Porter faced the task of restoring the film's soundtrack. Seated at an 18-foot console within a cavernous 420-seat theater, Porter spent hour after hour tweaking levers, dials, and knobs to convert the 65-year-old monaural soundtrack into a state-of-the-art, 5.1-channel mix.

"*Snow White* is a tough one because we want to walk a fine line between remastering it and keeping the original integrity of the soundtrack intact," said Porter, a three-time Academy Award-nominated sound engineer who's worked on such modern classics as *The Little Mermaid*, *Beauty and the Beast*, and *Aladdin*. "I wanted to create a pleasant listening environment, but in no way, shape, or form did I want to do something that would make someone feel that I did something to it."

Porter explained that there were two overall problems he had to deal with. "One was surface hiss because of the sound-recording process that was used in 1937." The second was dust particles, which adhere to the film itself and cause audible snaps. ➤

Snow White's Digital Makeover

This is not your father's *Snow White*. It isn't even his father's or his grandfather's. Disney's most recent incarnation of the classic film doesn't look like any previous version, including the print shown at the theatrical premiere. Considered alone, none of the several stages of film and video processing used for the restoration was particularly innovative, but their combination has resulted in a completely new look for this pioneering movie.

The work began in 1987 with a film-based restoration — or, as Disney's Chris Carey calls it, a "preservation" of the original film elements — done in preparation for the 1993 VHS and laserdisc release. Rather than do a simple telecine (film-to-video converter) transfer, however, the original film was scanned digitally using the then-new Kodak Cineon system.

Cineon scanning can result in an image with considerably higher resolution than high-definition television (HDTV). Each 1.33:1 aspect ratio frame of the film (the same as TV's 4:3 ratio) — *Snow White* predates the major wide-screen technologies — yields almost 13 million pixels, resulting in more than 3 thousand (!) lines of horizontal resolution. The highest resolution that HDTV can muster is a comparatively coarse 1,555,200 pixels per 4:3 frame, while the DVD system maxes out at 345,600 pixels per frame. Also, the colors in the Cineon scan were encoded in RGB format with a numerical resolution of 10 bits per color, which is four times greater accuracy than provided by the 8-bit encoding used in both HDTV and DVD. In short, this scan was encoded with far better potential picture quality than the best consumer media then and now.

For the VHS and laserdisc versions of *Snow White*, Disney used Cineon tools for dirt and scratch removal that would be considered relatively primitive today. Also, the cleaned-up Cineon data for those releases had to be read back out onto a film negative, that negative had to be processed and a new print struck, and that print then had to go through telecine conversion.

This whole digital-to-film-to-video rigmarole was completely bypassed for the new restoration, which started with the processed Cineon data from the 1990s. Since the film was aligned one frame at a time for scanning, the Cineon data was already free from a film artifact that often

goes unnoticed except by the cognoscenti — film weave, a slight slippage of the image vertically and from side to side as the film speeds through a projector or typical telecine machine. The data was worked on with more modern tools to remove dirt, scratches, and other film damage before being transferred digitally to high-definition video.

Next, the most radical visualizations of the film took place: film-grain elimination and color correction. To eliminate grain, the computer processing looked ahead

Chapel, this most recent renovation of Disney's venerated classic might elicit some protests from die-hard celluloid buffs. The major visual improvements make it look less like a (figuratively) warm and (literally) fuzzy film from the 1930s and more like one of the recent animated Disney features — which since the 1999 *Tarzan* have arrived on DVD via a similarly filmless digital pathway.

Carey has anticipated that "there's going to be a minority who will say it no longer looks like an old-fashioned movie



and behind the frame being processed to decide what was truly film grain (which changes randomly from frame to frame) and what was part of the original artwork (which remains comparatively constant from frame to frame). Carey claimed that "we were able to eliminate a lot of the color 'breathing' [frame-to-frame contrast variations] and virtually all of the film grain." Disney artists then color-corrected the high-def data using original animation cells as references. "You're really seeing the artwork — the color that was painted on the cell itself — more accurately," Carey said.

Like the tempests in some art-critic teapots aroused by the restoration of Michaelangelo's frescoes in the Sistine

"I miss the film grain, I miss the film weave, I miss the color breathing." But, as he pointed out to me, "it should be up to the Disney company to deliver the best representation of the art. The 35mm film was *not* the art — it was only the medium. We feel this is a better and more accurate representation of what Walt looked at when he said, 'I like that frame, let's capture it.'

To me, the *Snow White* DVD is a superb example of technology in the service of art. Disney's impressive array of digital processing tools and supervisory artistic talent have combined to make this newest *Snow White* the fairest — the most beautiful and the most faithful — one of all.

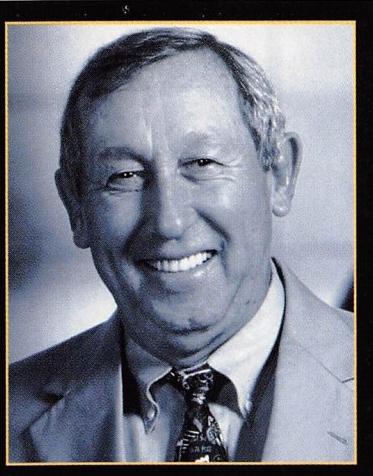
— David Ranada

Carey, a former sound engineer and Porter's former boss, explained that when you remove the hiss, there's the danger of losing the spectral content of the soundtrack itself. Added Porter: "Even with dialogue, there's a hiss level, and the last thing I want to happen is to be left with," he said, cupping a hand over his mouth to muffle his words, "is people talking like this."

"Digital technology has given us the ability to reproduce the original work exactly as Walt intended it to be seen and heard."
— Roy E. Disney

when we say 5.1-channel sound," he added. "It would have been unfaithful to the original to have the different dwarfs coming out of different speakers, or to have effects zooming by you as they would in a modern movie such as *Star Wars*, because that isn't the way this movie was made."

Instead bass comes out of the subwoofer, and the full range of sound and music



Porter worked with an editor to slice out snaps and pops, filling in the blanks with the material that immediately preceded it. "But if it altered the track in some audible way, we left the pop or snap in," he said.

To rid the soundtrack of the tinny sound native to many mono recordings, Porter re-equalized it. But handling distortion was trickier. "Those original recordings are what they are, so you warm them up the best you can through things like equalization and compression — the same techniques I'd use on a modern film that has a production soundtrack that isn't very good."

Mixing a New Potion

So how did Porter take a monaural track and turn it into a 5.1-channel recording? "This is something we've been working on for eleven years, and it's not about a box," Porter said. "It's more of an intellectual process. It allows us to take a mono track to a very pleasing 5.1, but in no way does it sound gimmicky or synthesized."

Porter and Carey were coy about describing the process, which involved mixing the original mono recording to spread throughout a 5.1-channel surround sound field. "I don't think everybody has figured out just how to do this the way we do it, and we want to keep the special sauce, well . . . special," Carey said.

"Let's be clear about what we mean

comes out of all five main speakers. "The music sounds exactly the same content-wise," Porter added, "but it absolutely envelops you, so the overall perception and feel of it is 2001."

And how would he characterize sound in 2001? "It's about the fidelity," he said. "In the 1937 version, there was very little at the low end on the soundtrack, and not much top end. All of the sound came out of one speaker." By contrast, Porter describes today's sound with the sensuousness a dessert chef might reserve for a perfect crème brûlée. "Now, it has a nice warm, full low end and a crisp-feeling top end in the appropriate places."

Porter said that when he was stumped, "I tried to put myself in a position where I felt comfortable knowing that if Walt were watching what I was doing, he'd approve."

Roy Disney was initially apprehensive about creating a 5.1-channel version of the original soundtrack. "When I heard about those plans, I jumped out of my seat and said, 'Wait a minute, they didn't make the movie like that.' It really scared me. I think it's important that we preserve the integrity of the original sound. What we've done is get closer to the original by splitting the sound between the speakers in a way that broadens it."

Disney sounded even more apprehensive about his role on the DVD, introduc-

ing the two-disc set through a conversation with the Magic Mirror. And so to what section did the scion of the Disney clan choose to go first, upon receiving a beta copy of the disc?

"I went immediately to check out my own acting — my speech and the little exchange with the Magic Mirror character," he said. "After I satisfied myself that it was okay — and that after all, I couldn't do anything about it — I went for a virtual walk through the historical art gallery, which shows you how art for the animations evolved over time."

Mirror with Attitude

The Magic Mirror serves as an interactive host throughout the disc, keeping viewers involved. "It's a great gimmick," Disney said, "because it gets you from place to place in a really cute, engaging way."

Carey feels that the Mirror plays a pivotal role in distinguishing the *Snow White* DVD from anything else on the market. "With the Magic Mirror as host, you're entertained right off the bat," he said during a visit to Disney's Secret Lab in the San Fernando Valley, where the Mirror images were produced. A cross between the Mask of Tragedy and the sardonic screen personality of the late Vincent Price, the Mirror is a departure from static DVD menus that leave viewers to wade through a disc's contents on their own. More important, said Carey, "It keeps you entertained."

An entire script and series of animations were paired to create the Mirror, voiced by Tony Jay, who was the voice of Frolo in *The Hunchback of Notre Dame*. The creative team decided that digital animation would lend the character more dimensionality than traditional hand-drawn animation. The Mirror was colored and the light and texture manipulated to give him a painterly look true to the original film.

The team then used software to isolate the Mirror's broad, key expressions. These were made into a series of animations that would enable them to change the expressions by moving a slider up and down. A digital library was then created so the animators could literally drag and drop key expressions into an animated timeline.

"One of the challenges of this character is that he doesn't have eyes — he's just a mask," said Stan Deneroff, director of DVD productions. He also has no teeth or lips to signal sounds. "We ended up dropping a lot of sounds in favor of expressions," said Eamonn Butler, who was responsible for developing the character. "It's not notice-

able because you're being entertained. If the dialogue works for you, you don't need to see the mask behave the way you would expect a character's face to behave."

If you don't make a menu selection right away, the Mirror has been designed to encourage you along. And his comic remarks vary so you won't hear the same thing every time you load the disc. So what are Butler's favorite lines? "I like the one where he's prodding the viewer to choose from the menu and says, 'I don't have all eternity, you know.' And then he remembers who he is, pulls a frown, and says, 'Oh, wait, I do.'"

The studio believes that its use of the Magic Mirror as host marks an evolutionary step in the history of the DVD. "The goal was to create an immersive experience," said Deneroff, "one where you feel as if you're truly entering into the *Snow White* world."

Underground Fun

The *Snow White* DVD even includes a game, *Dopey's Wild Mine Ride* — a difficult feat given that the average DVD player isn't designed for interactive game playing. A rescue adventure most likely to appeal to young children, it resembles many of the early CD-ROM games for computers. Players help Dopey navigate through the tunnels of the dwarfs' mine in a rickety mining car, completing several tasks and gathering other dwarfs in an effort to save Snow White from the Wicked Queen.

David Jessen, director of DVD productions, assigned the task of developing the game to a three-man crew in the Special Projects group at Walt Disney Television Animation: Ed Wexler, Antran Manoogian, and Gary Katona. More than any other team on the DVD project, the trio exudes an aura of wacky fun and in-the-trenches camaraderie reminiscent of the wonderful fellowship of Snow White's dwarfs.

The game is built around a series of clips from the movie, with choices for the player to make using the directional arrows of a remote control. For example, "You come to a place in the mine where you have to choose [which way to go], and given the technology parameters, we couldn't make that choice seamless," Carey explained. "There would always be that wait-and-load kind of thing. So the challenge was to come up with something that makes the waiting feel natural, so it's part of the story."

To cloak the pause that follows the player's choice of a direction at the mine crossroads, "we used pieces of original artwork, like a track switcher, and kept the textures consistent between the movie image and the

graphics," said Wexler. To match the look of the game to the movie, the team used two-dimensional animation of the characters in three-dimensional environments. "The effect was pretty 3-D," he said, "like the effects that come from using a multiplane camera like they did to create the *Snow White* film."

Elfin Outtakes

The members of the Special Projects trio got a big kick out of creating activities that challenge game players to choose a correct animated sequence from the film out of a lineup of imposters. "One that we had fun with, but we couldn't use, involved a panning shot of the dwarfs' beds showing their names carved into the headboards," said Manoogian.

"Instead of 'Sneezy,' it said 'Larry,'" deadpanned Wexler.

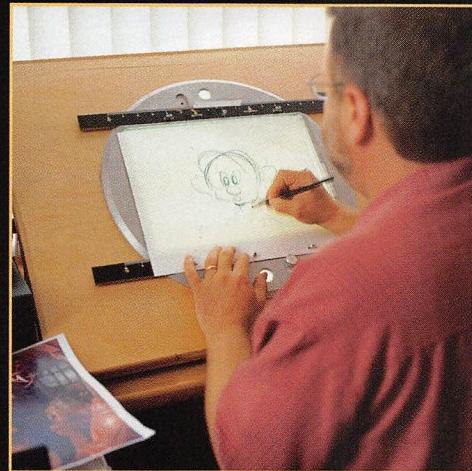
"Yeah, and there was also a 'Cheesy,'" added Manoogian. "But it was too much of a challenge for internationalization," chimed in Deneroff. "The names would have had to have been translated into 32 languages, and we would have had to create a new version of the sequence for every single language."

Another clip eliminated from the game was a mining-car crash. "That crash caused some concern because there was a fear that the dwarfs had met their demise," said Katona. "It turns out that they were fine, but we decided we didn't want to go there."

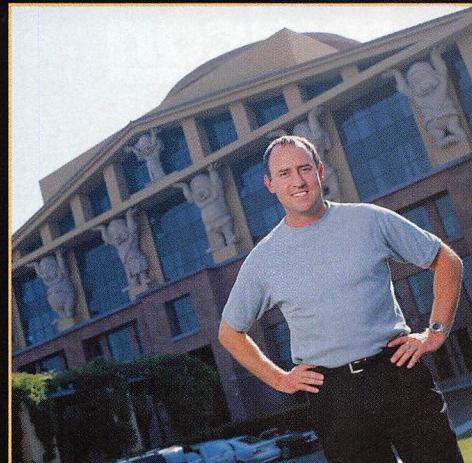
Coming Attractions

While many of the elements of the *Snow White* DVD will likely be employed in future Platinum DVDs, Carey hopes the lessons learned here will allow future releases to be even more innovative. And he said that the play-and-pause-to-load sluggishness of current DVD players will be gradually addressed. "The programming logic of current DVDs is like extremely basic computer programming. It's 'if-this-then-go-to' for all your choices, so it relies heavily on a set of film clips and menus." He expects the next generation of Web-enabled DVD players to allow for small amounts of material to be downloaded, such as updates of trailers already on the DVD, additional promotional offers, or new game-play elements.

And how would Walt Disney himself feel about all the digital tinkering with his film? "He'd have loved it all, because at heart, he was a technologist," said Roy Disney. "He saw technology the way an artist views paint brushes — as the tools that are needed to produce art and almost as important as the art itself. He'd have been so far ahead of us with computers, it would have made your head swim."



Ed Wexler (above) shows how the Special Projects team created new animation of Dopey for the DVD's game. Below, Carey poses in front of the Disney headquarters. The building's facade, with seven oversized pillars depicting the legendary dwarfs, emphasizes the importance of *Snow White* in Disney's history.



BOOTHROYD STUART
MERIDIAN 561

Digital Surround Controller



IBX U
Source Copy



B&K Components, Ltd.

Reference 30

DVD

SURRND 7

HEADPHONE

SLEEP

PRESET

ENTER

SAVE

DOWN

UP

SOURCE

MODE

MC-1 Digital Controller

DVD
LOGIC 7

VCR

DVD

V-Disc

TV

Aux

CD

Tuner

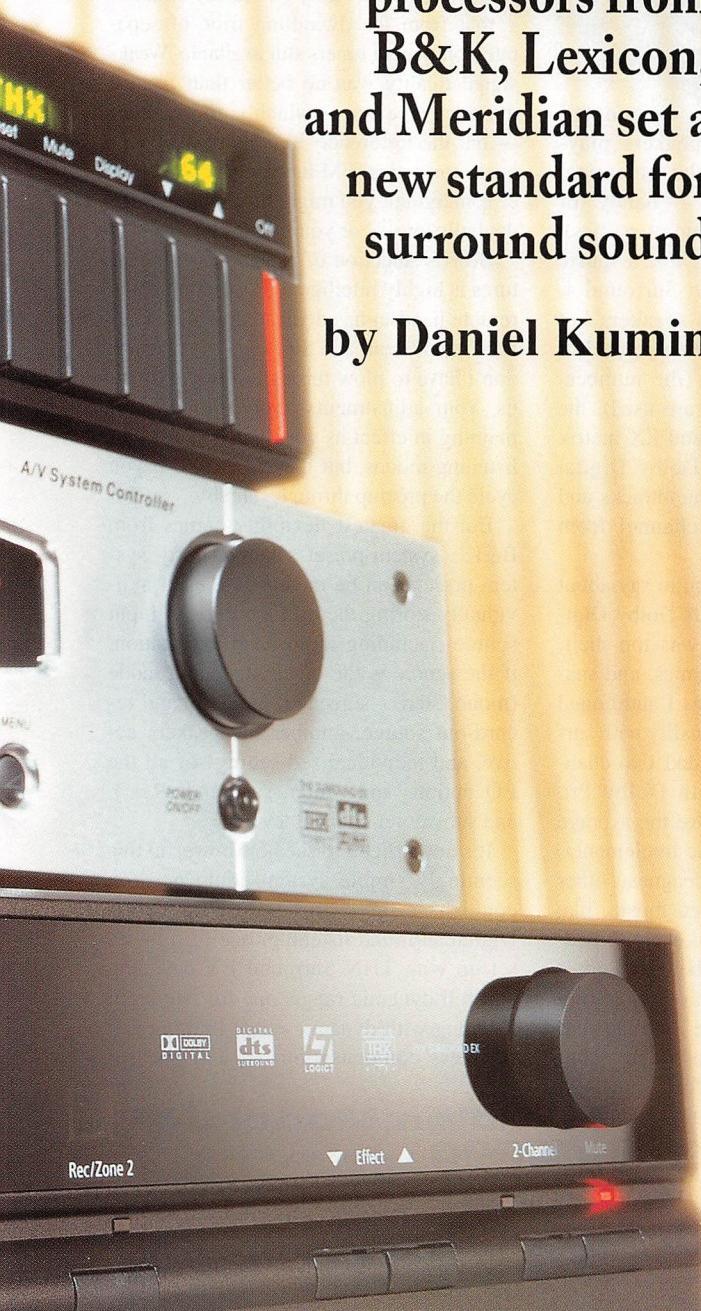
Tape

Power

AS GOOD AS GOLD

High-end preamp/processors from B&K, Lexicon, and Meridian set a new standard for surround sound

by Daniel Kumin



Why would anyone want to spend \$2,500 or more on a surround preamplifier/processor when he could get a flagship receiver for the same money? The three we've rounded up here — the B&K Reference 30 (\$2,798), Lexicon's MC-1 (\$5,995), and the Meridian 561 (\$5,000) — all duplicate the preamp and surround-processing functions of an A/V receiver, but forgo the power-amp section and, with two of the models, the tuner. All three provide decoding for 5.1- and 6.1-channel soundtracks from DVDs or digital-TV broadcasts, processing for simulated multichannel sound from two-channel music and A/V sources, and a full complement of system-control functions.

So why do they cost so much more than a receiver? Mostly because these are high-end products — and proud of it. Manufacturers tend to save their best, most advanced (and most expensive) technologies for separate components like these, while sparing no expense on their internal componentry to ensure the highest audio and video quality. Also, these preamps allow for degrees of tweakability that go well beyond what most receivers offer. They're for people who insist on having their movies and music sound absolutely right, with no compromises. If you're that hard-core about your sound — or would like a glimpse of how the hard-core live — read on.

B&K Reference 30

Located in upstate New York, just a stone's throw from Niagara Falls, B&K Components is known for its no-nonsense preamps, power amps, and receivers. For nearly a decade it has offered a steadily evolving line of A/V preamp/processors that boast fine performance from comparatively stripped-down designs. And what is even rarer in today's A/V world, all B&K products are designed and manufactured in the U.S.

The latest of these, the Reference 30 (\$2,798), is a just-the-facts-ma'am component that delivers THX-enhanced Dolby Digital, DTS, and Dolby Pro Logic decoding, a simple but powerful set of "master component" control options, and a convenient onboard AM/FM tuner in a relatively high-value package. In fact, the Reference 30 is essentially B&K's AVR307 receiver with the amps and speaker terminals removed.

This preamp is nothing if not businesslike. Its silver faceplate (black is also available) is inset with an arched display window, nine pushbuttons, a headphone jack, a power switch, and a multifunction knob. The supplied remote control isn't fancy, but a small LCD screen, fully illuminated keys, and full preprogrammed/learning capabilities make it a more powerful system controller than first impressions might suggest.

B&K makes available all the usual setup options, including the ability to assign the six discrete multichannel analog input jacks on its rear panel, intended for a DVD-Audio or Super Audio CD player, to any input position. (It doesn't do bass management for these outputs, however.) There are also some



B&K Reference 30

\$2,798 B&K Components, 2100 Old Union Rd., Buffalo, NY 14227; www.bkcomp.com; 800-543-5252

options you'd be hard pressed to find on an A/V receiver. For example, while I expect fully flexible bass management for digital inputs at this level, the Reference 30 goes further with an "Ultra" subwoofer mode that sends front left/right channel bass (below the user-specified crossover point) to the subwoofer while leaving the left/right front signals unfiltered. This allows the front pair to roll off acoustically, as some audiophiles prefer for speakers with good, if not unlimited, bass response.

The Reference 30 also lets you set the subwoofer crossover, common to all channels, to any frequency between 20 and 200 Hz in 5-Hz increments. Even more unusually, the B&K preamp's tone-control "turnover" frequencies are adjustable, from 20 to 300 Hz for bass and from 2 to 16 kHz for treble. There's even a single-band room equalizer — a notch filter you can set to any frequency from 20 to 300 Hz, to any bandwidth ("Q") between 10 and 100 Hz, and to any degree of attenuation. It's no substitute for careful setup, good speakers, and good room acoustics, but this feature can be a useful weapon in the battle against acoustical gremlins.

B&K's philosophy is to deliver stereo and surround recordings as their producers created them — period. Consequently, you get a choice of stereo, mono, or Pro Logic/THX surround playback for two-channel sources and Dolby Digital or DTS (depending on the source) for 5.1-channel sources, both with or without THX processing or quasi-6.1-channel EX/ES enhancements — and that's it.

But you can specify how many speakers will play regardless of mode, a simple but effective way of getting more utility out of a multispeaker setup without additional processing modes. With a stereo CD, you can order up four-channel stereo (left/right front and surround pairs), three-channel surround (Pro Logic steering with three front speakers only), seven-speaker

mono (all speakers playing the identical mono mix — handy for background music at parties), or any other combination. For a music DVD, you might punch up Surround-4, which uses both surround speakers but omits the center speaker. When you select Surround-6/7 or THX-6/7 (the numbers denote how many speakers are used), the B&K performs THX Surround EX matrix decoding for 6.1-channel Dolby Digital Surround EX or DTS-ES soundtracks and derives a back surround channel from nonencoded recordings.

I actually don't have much to say about the Reference 30's sound. Its Dolby Digital and DTS performance was top-shelf, yielding all the detail, dynamics, and spaciousness the best recordings I auditioned had to offer. The playback quality with surround-encoded and unencoded two-channel programs decoded with Dolby Pro Logic was fine — well above the average for digital-domain Pro Logic implementations — but not in the same league as other surround solutions for stereo music, like Meridian's Trifield mode or Lexicon's Music Logic mode (discussed below). I don't imagine B&K would dream of suggesting otherwise — the Reference 30 is an unabashedly film-centric component, conceived first and foremost for home theater movie watching and digital 5.1-channel sources. However, B&K plans to in-

corporate Dolby's impressive Pro Logic II, which can provide convincing simulated 5.1-channel playback from two-channel sources, in separate Music and Movie modes, into the Reference 30 sometime next year. Owners of the current version will be able to update it via software.

Remembering that this B&K preamp/processor also includes a tuner, I made a quick check of its AM/FM section. FM reception from strong stations was fine, but hardly equal to

that from the dwindling tribe of separate-component tuners still available. Weak-signal quality was no better than from a midprice receiver — which is to say, poor — but the Reference 30 is more than adequate for typical FM listening. Its AM tuner is marginal: you might be able to tune in the ballgame — or you might not.

B&K's selection of user-accessible features is highly intelligent. For example, the remote handset has dedicated volume keys for Center, Rear, and Sub levels so that you don't have to plow through onscreen menus. Your adjustments apply globally, remaining in effect as you switch sources or listening modes, but they reset to 0 if you cycle the preamp through standby.

But the greatest flexibility comes from B&K's system-preset scheme. Forty system presets can be memorized, each individually storing the user's choice of input source (including radio band and station, if the source is the tuner), listening mode (mono, stereo, surround, or THX) and record-out source, number of speakers active, and individualized settings of all the EQ options and center, surround (Rear), and subwoofer channel levels.

It's not difficult to see how powerful this seemingly simple system could be. You could have three presets just for Dolby Digital surround listening: one for movies set up with THX Surround EX decoding and full dynamic range, one for late-night listening with dynamic-range limiting and loudness compensation on, and one for

Meridian Model 561

\$5,000 Meridian Audio, 3800 Camp Creek Pky., Bldg. 2400, Suite 122, Atlanta, GA 30331; www.meridian-audio.com; 404-344-7111



features and specs

	B&K REFERENCE 30 (\$2,798)	LEXICON MC-1 (\$5,995)	MERIDIAN 561 (\$5,000)
SURROUND PROCESSING			
Surround decoding modes	Dolby Digital, DTS, Pro Logic with selectable THX processing	Dolby Digital, DTS, Pro Logic with selectable THX processing	Dolby Digital, DTS, Pro Logic II, MPEG; selectable THX processing
6.1-channel decoding	THX Surround EX	THX Surround EX	THX Surround EX
Ambience modes for multichannel signals	none	5.1 Logic-7, 5.1 Music	9 (logic-steering only)
Ambience modes for stereo	Pro Logic/THX	13 (logic- and DSP-based)	Trifield, Pro Logic II/THX, 7 more
Other surround features	Selectable speaker array for stereo sources; adjustable LFE output level	Independent subwoofer crossover selection for all channels; adjustable LFE output level	User-adjusted mode settings can be individually saved
CONNECTIONS			
Digital audio inputs/outputs (coaxial/optical)	6/5 inputs, 2/1 outputs	5/3 inputs, 1/0 outputs	5/1 inputs, 1/0 outputs
Multichannel analog audio inputs (for DVD-Audio, SACD)	yes	no	no
Stereo analog audio inputs	7	8	4
Component-video inputs/outputs	2/1	none	none
Composite- and S-video inputs/outputs	7/5	6/3	4/2
Audio-channel outputs	8 analog	8 analog	6 analog, 8 digital
Multiroom outputs	composite/S-video, stereo	composite/S-video, stereo	stereo
Headphone output	yes	no	no
SIZE			
Dimensions (WxHxD)	17 x 3 1/2 x 10 inches	17 3/8 x 3 5/8 x 11 1/2 inches	12 3/4 x 3 1/2 x 13 inches
Weight	10 pounds	10 3/4 pounds	10 pounds

music recordings with modified center and surround levels. You could even have presets for your favorite radio stations, with each one including EQ and surround-mode/speakers settings appropriate to its genre of music and the way you like to listen to it. (Each preset can carry a user-selected 13-character name, which should be enough to describe even a large number of presets adequately to tell them apart.)

The Reference 30 carries two selectable component-video inputs, each assignable to any input. These are said to be full-band, HDTV-capable, but I wasn't able to confirm this because my HDTV monitor uses RGB connections. You can also send stereo audio and composite or S-video to a second room or system, with independent control of volume and source selection. There are inputs for an infrared-repeater system for control from the remote room and a simple but effective system to avoid zone confusion of remote commands. An excellent Windows setup/control program is available from B&K's Web site or its dealers, though you might need an adapter to connect your PC to the Reference 30's network-style RJ-45 serial port.

B&K's Reference 30 is tough to beat for a straightforward, high-performance home theater dedicated to movies on DVD, digi-

tal TV broadcasts, and multichannel and stereo music on DVDs, CDs, and SACDs. Its two-channel playback is indisputably up to the task of critical stereo reproduction. I've lived extensively with the Reference 30's powered cousin, the AV307 receiver, so I can say with confidence that the basic design is simple, usable, and an excellent performer.

Meridian 561

If the slogan "Think different" hadn't already been taken by Apple Computer, it might have served Meridian well. Co-founded by a radical industrial designer and a forward-thinking audio engineer, the British company was the first to offer a high-end CD player, modifying a first-generation Philips/Magnavox player to achieve something even better than "perfect sound, forever." Its Meridian Lossless Packing (MLP) scheme, which encodes digital audio data more efficiently, is an integral part of the new DVD-Audio format.

Meridian's British-designed, British-made Model 561 preamp/processor (\$5,000) even looks different thanks to its much narrower than usual chassis and its arrestingly simple styling. Even the rear panel diverges dramatically from the norm, with a set of input/output connections that's dis-

tinctly different from what you find on most conventional A/V equipment.

To explain why the Model 561 is so unusual, I have to first note that Meridian also produces a line of powered speakers with onboard digital signal processing (DSP) and digital-to-analog converters (DACs). Designed to receive digital signals from Meridian preamp-processors like the Model 561, they do all the processing and amplification internally. Consequently, the Meridian 561 supplies analog outputs for only the standard 5.1 channels (left, center, and right front, left and right surround, and subwoofer), while all these plus two back surround outputs are supplied in digital form via two coaxial digital jacks.

So if you intend to add one or two back surround speakers to your system, you'll have to use either Meridian digital speakers; some combination of conventional speakers, an outboard DAC, and an amplifier; or a DAC and non-Meridian powered speakers. I used conventional back surrounds, feeding the 561's "rear" digital output to another A/V preamp running in stereo mode and then to a stereo power amp — but that's more awkward than simply buying a pair of Meridian's speakers.

The Model 561 also omits any discrete 5.1-channel analog inputs. So you can't



Lexicon MC-1

\$5,995

Lexicon, 3 Oak Park, Bedford,
MA 01730-1441; www.lexicon.com; 781-280-0300

connect a DVD-Audio or multichannel SACD player, since their output is available *only* in six-channel analog form. And it lacks any component-video connections, so a progressive-scan DVD player or HDTV tuner would have to be hooked up directly to your TV.

Otherwise, the Meridian 561 actually operates in fairly conventional fashion. I used the setup program for Windows 95 (and higher) that Meridian provides on its Web site and through its dealers. All of the PC-based configuration options are available using the remote control, too, but the software made it much easier to configure and customize the options. The remote gives you terse, one-line readouts on the front-panel display and onscreen for guidance, while the computer program has actual menus and submenus.

The amount of customization the Meridian permits is impressive. You can delete unused sources so that when you key the front-panel Source button it cycles only through the components you actually have connected. (The remote control allows direct access to each input. Nice.) The same is true of surround- and listening-mode presets. Since you have to step through these sequentially from either the front panel or the remote, being able to delete unused choices is a plus.

Another plus is being able to set the subwoofer-output crossover to any frequency between 30 and 120 Hz — and you can specify a different crossover for each of three classes of listening modes: Music, Logic, and 5.1-Movie. There are a few oddities, though. For instance, you can rename any input, but only with a five-character title. The front-panel display is 12 characters wide, so why not at least give us that much to work with?

The real story on the Meridian 561, however, is its surround processing. First, it eschews ambience synthesis just about entirely. Though some of the modes ma-

nipulate the channel assignment and “steering” of signals in sophisticated ways, as far as I could tell there’s no artificial reverberation, reflection, or similar processing — simply some judicious delays and selective equalization.

Yet the results can be stunning: the Tri-field mode, probably the closest thing here to an all-purpose “smart surround” mode, redistributes stereo signals to yield what’s claimed to be “a significant improvement over traditional stereo.” This mode sounded good with all but the most crudely recorded stereo CDs, and it sounded amazing with good ones. For example, carefully made multitrack studio recordings, like Mark Knopfler’s *Sailing to Philadelphia*, revealed multichannel sound that didn’t scream “3-D” yet was more open, detailed, and involving than plain stereo. Live acoustic recordings sounded equally outstanding, but many also yielded arrestingly natural results with the Model 561’s Super Stereo mode.

And those are just two of nine principal surround modes. In addition, the Dolby Digital, DTS, and MPEG modes can all be invoked either in “straight” or THX-enhanced guise. Finally, the Model 561 will play CDs carrying MP3 compressed-audio files and even has a surround mode said to be optimized for such material. (I couldn’t test how well it works, since I didn’t have an MP3-capable CD player with a digital output on hand.)

Users habituated to mass-market A/V receivers with fancy remotes and roccoco onscreen displays will initially find the Meridian’s user interface a bit spartan, and perhaps quirky, but the day-to-day operation ran smoothly. The Model 561 responded infallibly no matter where the remote was aimed or how it was oriented. The remote’s panel is uncrowded, and it makes good use of colors and shapes to differentiate the buttons. Its white-on-black labels

are harder to read than “positive” type, but they’re generously sized. There’s no illumination, though, so using it in a darkened home theater requires working by touch.

My only real ergonomic issue is the lack of any easy way to make temporary, on-the-fly subwoofer level adjustments.

(Center- and surround-channel levels appear as preset options, but not sub level. Attenuation for only the LFE channel, which goes to the subwoofer, is available in the 5.1-channel digital modes.) But plenty of other options give evidence of thoughtful design. For example, the implementation of Dolby Digital dynamic-range compression is the most intelligent and flexible I’ve heard. And the industry-leading implementation of Dolby Pro Logic II is powerfully flexible and exceptionally good-sounding.

The Model 561 offers numerous well-thought-out, user-adjustable parameters for each preset. And you can save any tweaked preset, along with such mundane but important adjuncts as channel levels, as a new preset (with your choice of name) and not overwrite any of the factory settings. Trust me — this is a powerful feature.

I would urge anyone whose interest in multichannel sound runs as much toward music as high-quality movie playback to give the Meridian 561 a thorough audition. I know of no better “audiophile” approach to ambience recovery for stereo music, and its 5.1-channel decoding is better than that from any other A/V receiver or surround processor. If “different” doesn’t give you pause, check out the little Meridian 561.

Lexicon MC-1

If you’re fascinated by the nuts and bolts of surround sound, if you’re absorbed by the trial-and-error process of optimizing it for each program, room, or speaker system, and if you enjoy a robust home theater budget, the Lexicon MC-1 (\$5,995) might be the surround preamp/processor for you. The U.S.-made MC-1 is the beneficiary of more than a decade of continual refinement of Lexicon’s original groundbreaking surround sound processor/controller, with better DACs and more extensive A/V switching facilities than its immediate predecessor, the DC-2.

With just a handful of pushbuttons, a single knob, and a two-line/16-character display, the MC-1’s faceplate is deceptive simple, as is the remote control. The spacious, clear, comfortable to hold and operate handset has relatively few keys, and they’re nicely spaced, intelligently located, fully illuminated (in blue), and have a variety of shapes. The price for this pleas-

ing simplicity is relatively "deep" onscreen menus. Ones for the most rarely used setup options can be as many as five levels below the main menu.

The logical menu structure and intuitive options made setup relatively easy, but there are still some unusual choices to be made. For instance, you can choose a crossover point of 40, 80, or 120 Hz for

your subwoofer. Better yet, you can independently select a crossover point for the front left/right, center, side surround, and back surround channels. You can also configure each input to a fare thee well, with flexible routing for video and both analog and digital audio signals. For instance, the MC-1's independent Zone 2 stereo output can be used with one of the video record

outputs to route a line-level A/V program to a receiver or powered speakers and a TV in a second system.

Experience with earlier Lexicon preamp-processors gave me a good idea what to expect from the MC-1. Even so, its finesse and potential for subtle surround enhancement quickly impressed me. The same can be said for the almost limitless

side and back surrounds were set at 40 Hz to exploit the nifty stereo-bass processing of many of the Lexicon's surround modes. The front L/R channels and the subwoofer outputs were also set at 40 Hz. The result was beautifully balanced sound — in fact, some of the best, most three-dimensional sound I've heard.

Lexicon has dropped its excellent Panorama ambience-recovery mode as well as all of the ambience-synthesis modes, like Concert Hall and Nightclub, included with earlier models. (These are still available in the MC-1.) The MC-1 instead concentrates on logic-based decoding of multichannel signals and of ambience-extraction processing of stereo (or matrix-encoded) signals — including its own superb Logic-7/Music program and Dolby's intriguing Pro Logic II Music mode. The rest of the MC-1's modes are familiar from the earlier Lexicons.

The remote control is pretty engaging. Simply press the button for the "family" of surround modes you want (THX, Dolby, Logic-7, TV, DTS, or Music), and the incoming signal format more or less determines the rest, with the adjacent Mode up/down keys always providing quick access to two or three related variants. As always with Lexicon, you can adjust the mode settings extensively, and you can always compare the results with plain-vanilla stereo using the remote's 2-Channel key. Or you can use the custom menus to compare your personalized version of any mode with the factory defaults. More important, the quality is never short of superb: the MC-1's quietness, clarity, and detail rival anything I've encountered in the world of multichannel audio.

The MC-12 virtually duplicated the technical performance of the MC-1 in Dolby Digital (DD) and stereo tests alike. In fact, the only difference was that the MC-12 was 0.4 dB quieter on the DD noise-level test (-76.6 dB) and a meaningless 0.1 dB worse with five-channel balance (0.2 dB) — oh, man! give me my money back!

There's much, much more I could describe, of course, but the main message is that the MC-12's sonic riches are deep indeed. In fact, it's hard to see how you could explore all of them and still hold a job. Fortunately, I just read that the new Powerball jackpot is at \$200 million and growing by the hour. — D.K.



As I write this, the latest wave of Powerball fever has swept over America, and four people are each roughly \$100 million richer. Sadly, I am not among them. If I were, Lexicon's ultra-high-end MC-12 Digital Controller (\$8,995) would be somewhere near the top of my shopping list.

This preamp/processor incorporates virtually every performance-enhancing feature I might ask for — and a few I didn't even know existed. It even has some key features you won't find on Lexicon's otherwise impeccable MC-1 — specifically, component-video inputs, switching for a progressive-scan DVD player or HDTV tuner, and discrete 5.1-channel analog inputs for a DVD-Audio or Super Audio CD player (there's no bass management for these inputs, however). And you can use the analog inputs even if you don't have a DVD-Audio or SACD player since they can be reconfigured as three stereo pairs for additional two-channel sources. The component-video inputs number an unprecedented four (woo-hoo!), and one set has pro-style BNC connectors, which are also used on the single component output.

There's more: The MC-12 provides 11 digital inputs and 2 digital outputs, and it offers not 6 or 8 or 10

but 12 speaker outputs: left/center/right front, left/right side surround, left/right back surround, and left/right auxiliary (for future expansion). There are also no fewer than three subwoofer outputs: left/right and LFE (the DVD low-frequency-effects channel).

The front panel is almost as impressive, with three identical source-select sections: main, Zone 2, and record-output. The latter two allow the MC-12 to serve two rooms with video and stereo audio in addition to the video and multichannel audio for your home theater. There is, however, no headphone jack, nor are there front-panel A/V inputs for a camcorder or game console.

I connected the MC-12 in an eight-speaker layout. (I normally use only one back surround speaker, but since this isn't a setup option with the MC-12, I trotted out a second speaker for the occasion.) The MC-12's bass-management system is among the most flexible I've seen. The speaker pairs for each channel can be freely set to roll off at any bass frequency from 30 to 120 Hz (in 10-Hz steps). The channels rolled off at higher frequencies automatically cross over to the channels set at the lowest frequency. The sum of the remaining bass is then sent to the subwoofer(s) connected to the left/right sub outputs. This allowed me to roll off my center speaker at 60 Hz while my

ability of the numerous surround modes, which are split about two to one between ambience synthesis and ambience recovery, to adapt to a user's system, setup, and personal tastes.

The Panorama ambience-recovery mode delivered a spooky realism from concert CDs, such as Lyle Lovett's *Live in Texas*. And it (along with several other modes) can modify the stereo presentation of bass content via effect parameters like Bass Content and Low Freq Width. Judicious monkeying with these settings brought a track like Lovett's "She's No Lady" right over the top — I could have been there in the club with him and the band.

The MC-1 also supplies one of the most extensive ranges of surround processing available for 5.1-channel digital sources. Both Dolby Digital and DTS movie soundtracks, and DTS-encoded music CDs, can be decoded unmodified, with THX processing added, or with either of two closely related (but different-sounding) modes optimized for seven-speaker layouts: 5.1 Logic-7 and 5.1 Music. Each 6.1-channel mode offers a broad range of options and adjustments to deliver smooth, believable envelopment without compromising the clarity and punch of the discrete-channel digital sources. The remote provides direct access keys to each group of surround modes — a convenience I occasionally wished for when using the Meridian processor (the B&K has similar facilities, although fewer choices).

So does the MC-1 have any flaws? Well,

it lacks the Reference 30's always-available channel-level trims. (You have to travel into the Effect Adjust submenu to tweak the surround, center, or subwoofer levels.) But you do get Lexicon's nifty Tilt Adjust feature. Buried in the Equalization submenu, this useful, global bass-to-treble balance control, adjustable in 0.2-dB increments, is among my all-time favorite tone controls. More troubling is the lack, as on the Meridian 561, of any way to integrate DVD-Audio or multichannel SACD playback, and the lack of integrated component-video switching. Either feature might be irrelevant to many or most home theater builders, however.

The Lexicon's sonic performance, from two to six channels (or seven speakers), was universally pristine. It merges a large collection of the best ambience-synthesis surround processing modes I know of with a handful of powerfully effective ambience-recovery modes (Panorama, Music Surround, and Music Logic) and an unexcelled set of enhancement options for 5.1-channel digital surround. You can even directly compare two-channel playback with the currently selected surround mode, in case you want to wow your friends and win new converts to high-end surround sound.

In short, if you want the surround processor with the mostest, at least in terms of options and tweakability, the MC-1 is it (or, at least, *was* it — see page 109). It's an undeniably powerful component, with all the potential for operator overload such power entails. Yet it can be set up, calibrat-

ed, and enjoyed to great effect while barely scratching the surface of its potential. Many owners may choose to use it this way, but to me that misses the point, since exploring the Lexicon is half the fun.

The B&K Reference 30 is the simplest, most user-friendly, and least expensive of these three preamp/processors. While it's limited to stereo, Dolby Pro Logic, and Dolby Digital or DTS playback — all that many home theater buffs ever require — its performance in each mode is plainly top-shelf.

The Meridian 561 seems squarely directed at the audio purist whose multichannel ambitions run to music as much as movies. Its film-sound and stereo performance are second to none, and the ambience-recovery options it can bring to bear on existing stereo music recordings are close to ideal — my ideal, anyway.

Lexicon's MC-1 does all of the above with similar finesse in almost every regard — plus a good deal more. Its Panorama and Music Logic ambience-recovery modes are close rivals to Meridian's Trifield and Music modes, while its nearly bottomless well of ambience-synthesis possibilities, via extensively user-adjustable modes like Nightclub and Concert Hall, give it unique power.

Value, of course, is a different matter. These are expensive components, and for that kind of cabbage, you should demand superb sound. These three examples won't disappoint whoever buys one.

SE

in the lab

DOLBY DIGITAL PERFORMANCE All data obtained from Dolby Labs' Dolby Digital test DVD. Reference input level is -20 dBFS. All speakers set to "large" except for subwoofer measurements, where they were set to "normal (small)." All are worst-case figures where applicable.

	B&K REFERENCE 30	LEXICON MC-1	MERIDIAN 561
Output level at 0 dBFS	1.4 volts (volume = 0)	1.6 volts (volume = 0)	2.2 volts (volume = 87)
Distortion (re 1 kHz, 0 dBFS)	0.007%	0.005%	0.006%
Noise level (A-wtd, re -20 dBFS)	-75.8 dB	-76.2 dB	-74.6 dB
Excess noise (16-bit, with sine tone)	+1 dB	+1.1 dB	+2.4 dB
Frequency response (20 Hz to 20 kHz)	+0, -0.2 dB	+0, -0.2 dB	+0, -0.3 dB
Subwoofer-output frequency response (rolloff above -6-dB point)	24 dB per octave above 80 Hz	24 dB per octave above 80 Hz	24 dB per octave above 80 Hz
High-pass-filter frequency response (rolloff below -3-dB point)	12 dB per octave below 80 Hz	12 dB per octave below 80 Hz	12 dB per octave below 80 Hz
Maximum unclipped subwoofer output (at reference volume setting)	9.2 volts	10.3 volts	6.3 volts

All three of these 21st-century preamp-processors measured within a whisker or two of our ability to discriminate performance. While each proved superbly accurate and quiet, the Lexicon took the blue in most tests — but note that these

distinctions are all but meaningless, residing in the parts-per-thousandth realm. Stereo tests using *Sound & Vision*'s proprietary real-world dithered test signals confirmed this performance in every case.

— D.K.

Collector Friendly



Expandable ➤ Storage

Start with a pre-assembled 7 tier multi-media rack (MM-252) and add on as your collection grows. Shown: Model MM-252x4 Clear finish \$589 or Black \$499. New 32 page brochure: [877.804.7650](tel:877.804.7650) or check us out online at www.Boltz.com

BOLTZ
STEEL FURNITURE



from
Total Chaos.

The IntelliControl® Home Theater Automation System. One-Touch control of your entire home theater system.

to
Total Control.



Visit your authorized Niles IntelliControl® dealer to experience "A Day in the Life of IntelliControl®" or call 1-800-BUY-HIFI (1-800-289-4434) for more information.



NILES®

BLENDING HIGH FIDELITY
AND ARCHITECTURE®

©2001 Niles Audio Corporation. Niles, the Niles logo, IntelliControl, and Blending High Fidelity and Architecture are registered trademarks of Niles Audio Corporation. Printed in USA 8/01 AD00045/SV





Choosing an Installer

A step-by-step guide to finding the right man for the job

by John Sciacca

Custom installation has trickled down quickly. A few years ago the exclusive plaything of the very rich, it has since made its way through the merely rich and recently arrived at the middle class. Rising incomes and rapidly plummeting prices for sophisticated technology have conspired to make it possible for the Average Joe to seriously consider hiring a professional to pipe music throughout his house or install a one-touch-does-all home theater.

In "Sound All Around" (July/August), "Video All Around" (September), and "Beyond Audio/Video" (October), I explored options for multiroom audio and video systems as well as "smart" control systems that do the work for you. A common thread

has run through these articles: since most of these systems require extensive design, planning, and wiring, it's essential to find the right professional to handle the job.

While much of what follows is applicable to both new and existing houses, this article is geared primarily toward new construction. If you're building or planning to build a house, you can save yourself many headaches — and thousands of dollars! — by planning your system now.

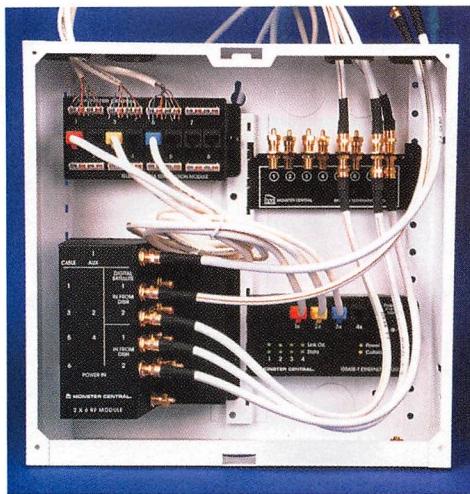
Looking for a Few Good Men

This might sound obvious, but it's the best piece of advice I can give: hire someone who *knows* audio and video. While there are undoubtedly many electricians who wouldn't have any trouble pulling speaker

wire, their audio or video expertise most likely ends there. Let them do what they do best, and find someone who knows the field to do your custom installation.

The best place to look for the right man — or company — is www.cedia.org. CEDIA, or the Custom Electronic Design & Installation Association, is a trade group of companies specializing in planning and installing electronic systems for the home. The CEDIA site will tell you what you need to know about the organization and will allow you to search your state for members near you.

Recommendations from friends and neighbors who've had a system installed are another great resource. Not only can they comment on their experiences with an



All of the wiring for your various audio/video systems is run to a panel, like Monster Cable's Monster Central HomeRun, that accepts modules for the different functions.

installer, but you'll be able to check out a working system. Make sure you ask how well the company stuck to the work schedule and how it handled post-installation issues like service calls.

You should also talk to your builder. Since he's involved with different trades on a daily basis, he might know of several firms that can do your project. If he says, "I can have my electrician do the job," kindly thank him for his time and look elsewhere.

Whoever you consider, ask for references for similar-size projects. A firm renowned for installing \$100,000 showcase systems might not be the right choice for a \$10,000 project, and vice versa.

Making a First Impression

When you go to your initial meeting with an installer, don't expect to walk into a typical electronics store with shelves lined with hundreds of TVs and A/V components. Many installers don't even have showrooms, and those who do usually have just a few systems operating in a home-like setting.

There will likely be several people involved with your project, but you'll work primarily with one or two designers. Since your relationship with these people is crucial to getting the job done right, it will be worth your time to get to know and trust them. Unlike the other people involved in the house construction, the installer will be working with you before, during, and after the house is completed — often *long* after.

The system designer will present you with different concepts, including some possibilities you probably hadn't considered. Since this is the "dare to dream" phase, carefully consider any suggestions,

even if they mean amending or discarding what you'd at first envisioned.

Among the things the designer could ask you are: How many zones would you like to have in your multiroom system? Which rooms should have keypad or touchpanel controls? Do you want to be able to control the lighting, heating, cooling, and A/V systems from anywhere in the house?

You should also have a rough idea of how much you are willing to spend for the installation. It's extremely important that you and the installer share the same definition of "top of the line." You might be thinking \$10,000 while he's assuming \$100,000 or more. Clearing the air on this will help ensure that you get a proposal that fits both your needs and your wallet.

The Best-Laid Plans

Once you've selected an installer, the first thing he'll likely want to do is go over your blueprints with you. Depending on where you are in your construction schedule, he might suggest changes to the building to create a better system. These can include adding equipment storage areas, changing door or window locations, and relocating fireplaces. Even a suggestion as minor as changing the way a door opens can make a big difference.

The designer will then probably want to tour the house. With existing homes, this is critical to determining what options are open. Blueprints are great, but there's no substitute for walking through the actual space and taking real measurements.

The Proposal

The installer will then come up with a proposal. Designing a system can be very time-consuming, and some firms charge for this time. If there is a charge, find out what it includes (CAD drawings, blueprints) and if it will be applied to the purchase price of the system.

The proposal can be a simple spreadsheet or a multipage affair detailing every aspect of the project. Most installers divide the proposal into logical sections that make it easy for them to explain. One common method breaks the project into phases, such as Prewire, Trim Out, and Final Install. Another splits the job into rooms or areas, or into projects, such as Theater, Housewide Audio, and Lighting.

Some firms will give the price for each item, while others give prices for the phase, area, or whole project. The proposal will also include labor costs, which will be priced by the hour or by the job. Some firms

will give you an estimate while others will give a fixed rate. Most installers charge between \$40 and \$80 an hour for labor.

You'll find that any firm will be glad to comply with changes that need to be made midstream, but you should realize that a change order will mean paying more money. Something that seems as simple as adding speakers to a room not included in the proposal could push the system beyond the original design, since this can also mean having to add an extra amplifier or some other component. Also, there might be restocking charges for changed equipment.

Whatever method the firm uses, be certain that you understand exactly what the proposal covers and that you see the bottom-line price.

Getting Wired

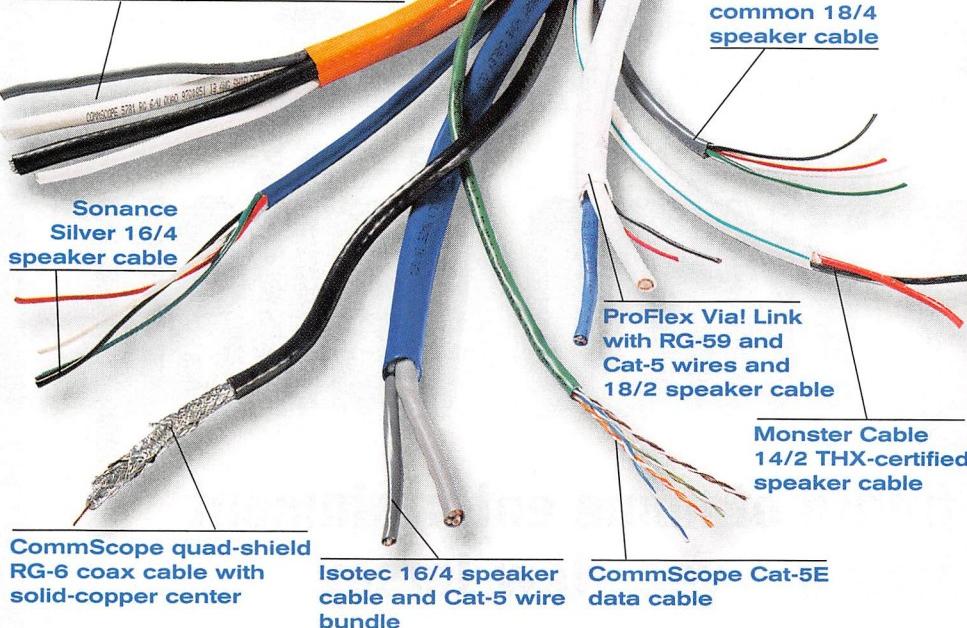
Because practically any system you decide to go with will need wiring, and often lots of it, you should keep four things in mind:

- There's no such thing as too much wire. There is only wire you aren't using yet.
- Using the wrong wire is usually the same as having no wire at all. When you see all of the different types listed on the proposal (see "Why All the Wire?" on the facing page), realize that each kind serves a different purpose.
- Wiring that's pulled or terminated incorrectly can be ruined. RG-6 coaxial cable with kinks or poorly crimped ends can cause ghosting in video images. Improperly terminated Category 5 (Cat-5) data cable can have greatly reduced bandwidth. And speaker wire pulled too close to electrical lines can pick up hum.
- It's cheaper to pull the wire at the construction phase than to add it later.

Plan on having Cat-5 wire pulled to every telephone location, four-conductor speaker wire and Cat-5 pulled to every volume control (plus RG-6 and two-conductor speaker wire if you plan to upgrade to a touchpanel), and two runs of RG-6 and Cat-5 pulled to every TV location. If you think you'll want to add X-10 automation (see "Beyond Audio/Video," October), instruct your electrician to pull a neutral wire to each wall switch to ensure compatibility.

Your wiring has to meet both Underwriter Laboratories (UL) ratings and local building codes. Residential applications usually require a CL2 rating from UL, though your project might need wire rated for CL3, Plenum, or Direct Burial. Wiring to these standards will ensure that your home is ready to take advantage of any new technologies over the horizon.

CommScope Ultra Home bundled wire with two quad-shield RG-6 coax cables and two Cat-5 wires



Sticking to a Schedule

After you've decided on a system, your job will advance based on the house construction timetable. While installers differ in how they set up a schedule, you can expect the job to progress in three main phases:

• **Prewire.** This happens right before the house's insulation is installed, but after the electrical, heat, cooling, and plumbing systems have been completed. Your installer will be careful to avoid the wires for other systems and will use the lighting layout as a guide for positioning in-ceiling speakers. He might want to return after sheetrock has been put in to see if a wire has been cut, nailed, or otherwise compromised.

• **Trim Out.** After the painting has been finished, the installer will return to install in-wall speakers, volume controls, and wall plates. The structured wiring panel, which is usually located in a concealed but easily accessible spot like a closet or attic, might also be terminated at this point.

• **Final Install.** This is normally done after you've moved in, and it can take hours or days depending on the size of the system and the amount of programming and troubleshooting that needs to be done.

Show Me the Money!

You'll need to pony up some cash to pay for your installation sooner or later — probably sooner. But take comfort in the fact that you'll usually have some options regarding how and when you'll pay.

If the installer is acting as one of the builder's sub-contractors, you might be able to roll the entire cost of the system into your mortgage. If so, he'll be paid by the builder from your regular construction draws.

WHY ALL THE WIRE?

Almost any custom installation will use several kinds of wire. Below are some terms you should know when dealing with your installer.

• **Cat-3.** This is the FCC minimum standard for residential telephone wiring. Cat-3 has a bandwidth of 16 MHz, but Cat-5, which has a 100-MHz bandwidth and costs only slightly more, is probably the better choice.

• **Cat-5.** Made of four unshielded, twisted pairs of cable, this wire is ideal for handling signals from computers, telephones, digital cameras, keypads, and infrared devices. As mentioned, Cat-5 is rated at 100 MHz (Cat-5E, or datatwist, is rated at 350 MHz). The cable's quality is determined by its attenuation-to-crosstalk ratio. The higher the number, the lower the bit-transfer error.

• **RG-6.** This coaxial cable is the new standard for carrying CATV, video, and satellite signals. It has a solid center conductor surrounded by a foam dielectric and aluminum shielding. Higher-grade RG-6 wiring has better shielding (quad shield), higher bandwidth (2.2 GHz), and a solid-copper center for lower resistance.

• **Fiber-optic.** The fiber-optic cable most commonly used in homes is "multimode 62.5," usually run in pairs for sending and receiving. Fiber works over two light windows, 850 and 1,300 nanometers, which have bandwidths of 200 and 500 MHz per kilometer, respectively. The bandwidth increases as the length of the wire is shortened. This kind of wire can carry a huge amount of information. Imagine RG-6 as a back-country road and fiber optic as an eight-lane interstate — they'll both get you where you want to go, but one is much faster.

• **Speaker wire.** Either two- or four-conductor wire will be used, depending on the run. A volume control takes four wires (left and right positive and negative for each) while a speaker takes only two (positive and negative). Wire is rated in gauge, with a lower number referring to thicker wire that creates less resistance over long runs. A minimum of 16-gauge wire with 65 copper strands per conductor is preferred. Wire is usually specified by gauge and number of conductors, as in 16/4 or 14/2.

• **Structured wire.** Wires can be bundled for ease of installation. For instance, you could have two RG-6 and two Cat-5 (with or without fiber optic), or 16/4 and Cat-5.

• **Home run.** This isn't a wire type but a method of wiring where all of the wire is pulled to a central location. There, it is usually attached to a panel outfitted with a module to handle cable TV (CATV), digital satellite service, and telephone distribution, another for computer local area network (LAN) routing, and others for security and lighting control.

Three popular systems are Open House, On-Q, and Leviton.

— J.S.

If the installer is working directly for you, he'll likely ask for payments based on a schedule. These are usually based on percentages of the job cost and broken up into three to five installments. A four-payment plan might call for 15% on acceptance, 25% on completion of prewire, 50% before trim out, and 10% on completion.

Since it's likely some of the electronics you agreed on for the proposal will change during the year or more it can take to finish construction on your house, make sure you know how the installer handles model changes. If there's a price drop, for instance, will you get to take advantage of it?

A more serious problem occurs when a new model has different dimensions from the one it's replacing. If you're having custom cabinetry built around a TV or speakers, pay for those components now so that a delivery delay doesn't mean you wind up with a potentially larger or differently proportioned model. Many installers will work with your cabinetmaker and will even help you choose one.

Selecting a housewide audio/video/automated-control system can be daunting, but finding the right person to steer you through the process doesn't have to be. A good installer will work closely with you until the end — and beyond. And you can rely on him to take your ideas all the way from the drawing board to the touchpanel.

SW

John Sciaca is the lead system designer for Custom Theater and Audio, a CEDIA member organization in Murrells Inlet, South Carolina.

Thanks to Mark Huggins, technical service specialist at CommScope, for his help.

T E C H T O U R

Visiting Video Valley

Divining the future of home entertainment in New Jersey – yes, New Jersey

by Michael Antonoff

People who think of New Jersey as a blur of power lines from the Turnpike or the home of Tony Soprano might not associate the state with technology, but it gave rise to Thomas Edison and color TV as well as both digital satellite TV and high-definition TV. Some have dubbed it "Video Valley," but Jersey is a center for more than just video technology. Just off Route 1 in Princeton, you'll find the David Sarnoff Research Center, Treveni Digital, Thomson Multimedia Corporate Research, and the Panasonic Information & Networking Technologies Laboratory. Drive an hour north, and you're in the green hill country of AT&T's Shannon Labs, Lucent's Bell Labs, and Telcordia Technologies (formerly Bellcore). New Jersey's high-tech history spans more than 100 years. Compare that with California's Silicon Valley, a back-bay plain that 25 years ago was known largely for its prune yards.

If you think it's difficult to shop for equipment that won't be obsolete in six months, put yourself in the pocket protectors of the technologists who are placing bets inside the world's largest electronics companies. They're making billion-dollar decisions that they and their customers will have to live with for years to come. That's why their R&D facilities are so critical, and why peeking under the tent to see scientists strut their stuff is so fascinating.

I was expecting to meet men in starched lab coats, but the people with a foot in the

future look like you and me. One futurist, a former Wall Streeter now at AT&T Labs who plans "collaborative listening groups" for the Internet, actually had a bare toe in the future since he was wearing sandals and shorts.

Lab coat or not, just about everyone in the Garden State who's paid to be smart about the future agrees that the arrival of the broadband Internet, already here for some of us, will be the Next Big Thing in home entertainment within two to five years. But it's unclear when this massive pipe will reach you or precisely how fast the bits will be prancing on your electronic hearth. And if you ask how you'll channel the gush of movies, music, games, and services from room to room once it crosses your threshold, things get a bit dicey. When scientists diverge, you know an awful lot is up for grabs.

Any Movie, Any Time

One thing most of New Jersey's deep thinkers do agree on is that in-home mass storage will become so cheap in the next few years as to be nearly free. If you think the 60-gigabyte (GB) capacity of today's video hard-disk recorders is ample, how about a drive with more than 10 times that capacity in every home? A service could download dozens of pay-per-view movies to a 1,000-GB home server, perhaps in the middle of the night. You could watch your pick of them later, using pause and speed controls as on a DVD player. Even if you

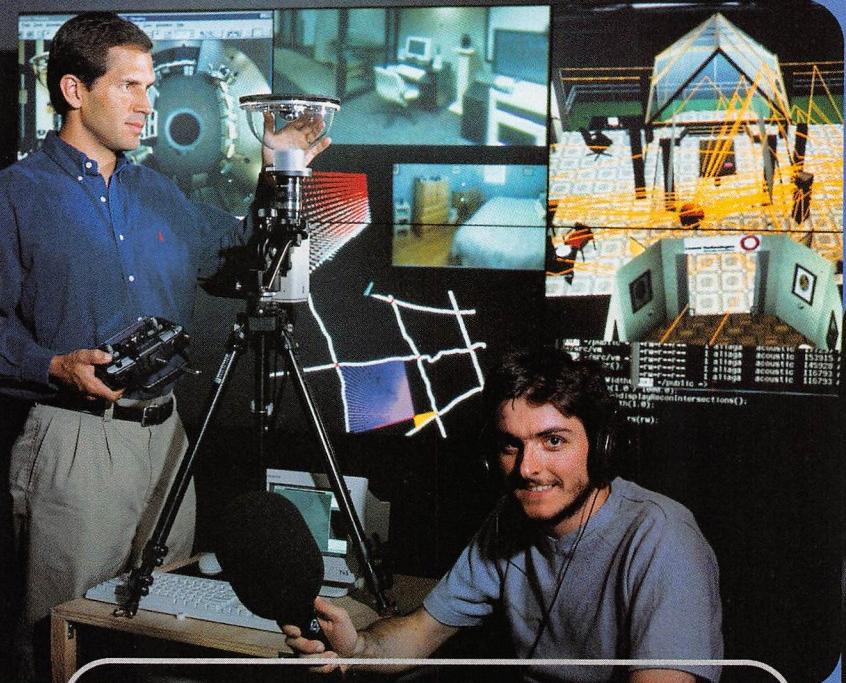
watched only one, it would still be more efficient than the wasteful way cable and satellite companies hog bandwidth with recurring feeds of the same pay-per-views.

Everyone agrees that broadband is on the rise — households are joining the high-speed ranks at a rate of 119,000 per week, or 6 million per year, according to Kenetic Strategies. What's lacking is a *minimum* speed limit so your neighbors can't rib you for connecting *too* slowly.

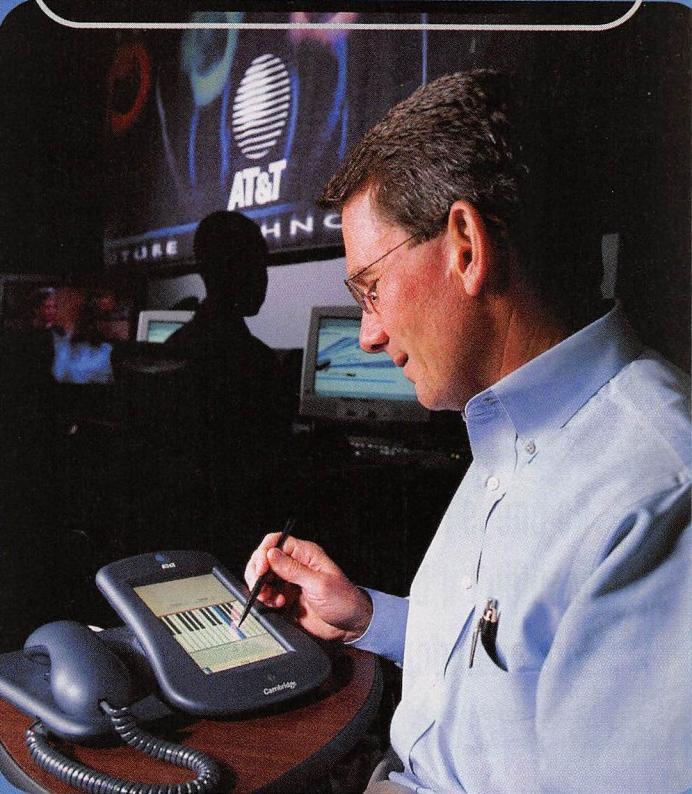
"Below 500 or 600 kilobits per second [kbps], people say it's not much different than a phone line [up to 56 kbps] or an ISDN line [128 kbps], even if it's quicker," explained Norman L. Schryer, division manager for Broadband Services Research at Shannon Labs. "However, when you approach 700 kilobits, all of a sudden there's an astonishing emotional response. Yeeow! Isn't that fast?"

Pinning a speedometer on the mouths of broadband proponents is important, because only then can you get them to be practical about applications that, for now, exist mainly inside facilities where researchers get all the bandwidth they need.

One method, called datacasting, takes advantage of the very fast but one-way bitstreams used for broadcasting digital television (DTV). Researchers at Treveni and Panasonic want to use this delivery system to send buckets of bits to every home in America that has a DTV receiver. This past spring, PBS used a platform developed by Treveni to begin experimental broadcasts



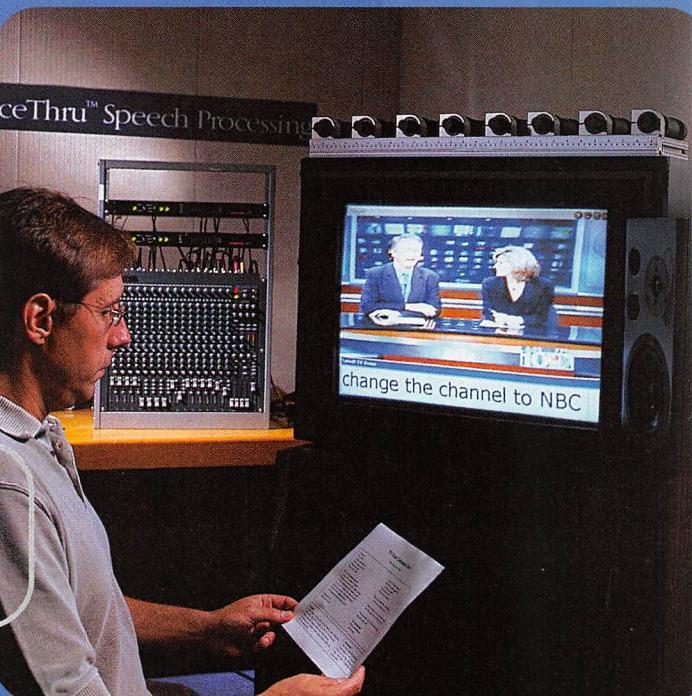
▲ At Bell Labs, Daniel Aliaga (left) and Nicholas Tsingos show a plenoptic camera (on tripod) for capturing 360° of visual information. The virtual world created with their software can be "walked through" as if you're really there.



▼ At AT&T Labs, Ken Schmidt taps on the touchscreen of a broadband phone. A virtual piano is one of many applications envisioned for the phone of the future. People on opposite ends of town — or the world — could play a duet.



► At the David Sarnoff Research Center, Craig Fancourt is perfecting a voice-control system for TVs that will work even when commanded from across a noisy room. Soon it might not matter if the dog runs off with the remote.



to households using special Zenith set-top decoders that were within range of five DTV affiliate stations, including WHYY in Philadelphia. The 19.2 megabits per second (Mbps) that each DTV channel can broadcast offer viewers a variety of ways to interact with the content, according to Treveni's president and CEO, Mark Simpson. In the spring experiment, the series *Scientific American Frontiers* with Alan Alda was reduced to three-fifths of the screen to make room for menus that brought up supplemental information like a glossary and a quiz.

Bit Storm Rising

You're watching a travelogue about Tuscany, but the host doesn't mention the address of that restaurant with the terrific

the phone, the touchpad could easily be detached and used as a universal remote to control everything in your home theater, explained Ken Schmidt, a business development director at AT&T Labs.

Although the Broadband Phone is still in the lab, its potential audience is building. As of this past spring, 9.4 million homes — about 9% of the more than 100 million U.S. households — had signed up for high-speed access. According to Statistical Research, this is nearly twice the number of broadband-connected households a year earlier. Cable-modem users represent about 70% of today's broadband homes, while almost everyone else is connected via a Digital Subscriber Line (DSL).

Looking further out over the next five years, other scientists are exploring the

robot can roam through rooms and capture 360° of visual information. Software then assembles the images into a view that looks completely realistic. "Steering" with a mouse attached to a computer, I could move in any direction and look up or down in a highly immersive virtual world.

I suggested that they take the robot to the Thomas Edison Memorial Tower in Menlo Park to create a virtual tour, but Carlstrom pointed out that the place is too dark (you'd think if anyone would know how to screw in a light bulb . . .). Besides, the robot doesn't like stairs.

A virtual audio demo was next. This time I "walked through" (on the wall screen) an elegant lobby where music was playing through several floor-standing speakers. As I approached a speaker, the sound got louder. When I turned around, the music was behind me. And as I glided into another room, the music faded from the correct direction. Being able to manipulate sound heightens the realism of a virtual world.

Mute, He Said

For now, though, I might have to settle for the sound of my own voice controlling a TV. Wouldn't you love to simply say "Mute" whenever Chris (*Rush Hour*) Tucker comes onscreen? That's actually one of the promising technologies soon to emerge from the David Sarnoff Research Center. Craig Fancourt in the Adaptive Image and Signal Processing Group had me stand about 6 feet from the front of a TV set decked out with an array of microphones. When I said, "Volume up," the sound got louder. Saying "NBC" changed the channel to the peacock network. The sound of a soap opera coming from the TV's speakers and the noise of a big fan whirling over my shoulder could have interfered with my commands, but the system worked fine.

The voice-command system used a PC behind the TV to convert my speech to text, but when the product is ready to leave the lab, the software and microphones will be built into the TV itself. Sets incorporating the voice-command technology could be available as soon as next year.

How to Void the Warranty

Getting broadband to the home is one thing, but what do you do with all those bits once they arrive? Wouldn't it be convenient if you could watch any downloaded movie, DVD, or satellite or cable channel on any TV in the house, no matter which room it originated from? Enter the Networked Home — or, more specifically,

No one is talking about a "Star Trek" holodeck yet, but wouldn't it be cool if you could turn your big-screen TV into a window on the Louvre or a tram in Disney World?

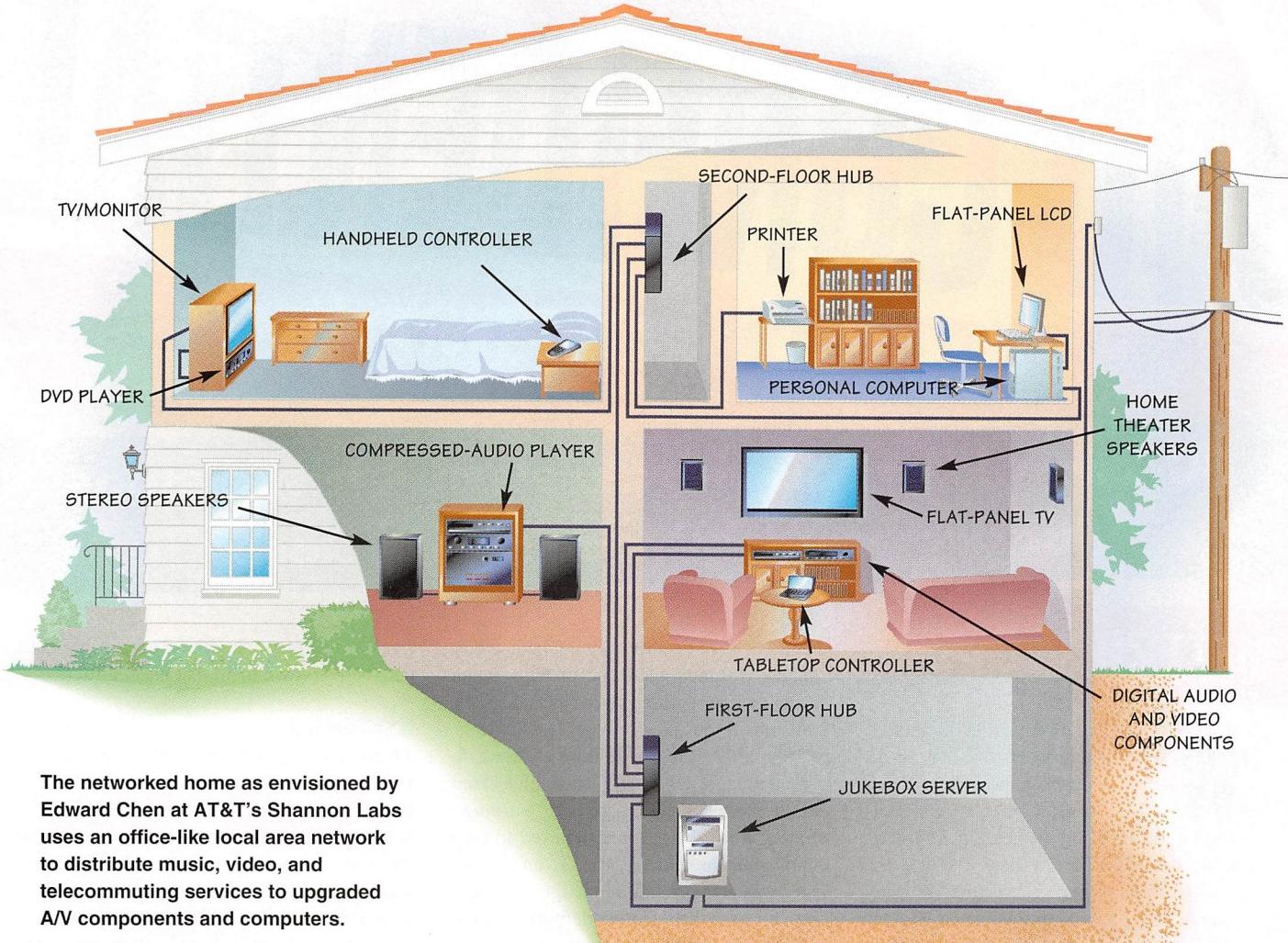
view. Wouldn't it be great if you could press a button and have the information pop up on the screen? Panasonic has developed an interactive platform, already being used as part of the DTV rollout in Europe, to do just that. But Rob Fish, vice president and director of the Panasonic lab, is also bullish on the impact of DTV in the U.S. "There's a big, fat pipe in the sky," he explained. "Each channel offers 19.2 megabits per second — and best of all, it's free!" In his demo, people watching a travel program used a remote with color-coded keys that matched commands on the TV screen, which could be activated for more information.

On the low end of two-way broadband is AT&T's prototype Broadband Phone, a color touchpad display with microphone, speaker, and camera. At speeds somewhere above 128 kbps but below Schryer's emotive number, the facial expressions of the people on the videophone screen keep up with what they're saying. The Broadband Phone could offer a range of services, including ordering music, playing games remotely, or even playing a piano duet with someone across the country by touching an identical keyboard display. After you've downloaded the latest infrared codes into

range of applications that will become possible when speeds approach 150 Mbps or when, with far less bandwidth, content is smartly downloaded to a massive hard disk for future use instead of streamed in real time. No one is talking about a *Star Trek* holodeck yet, but wouldn't it be cool if you could turn your big-screen TV into a window on the Louvre or a tram in Disney World and be able to move through major-league attractions without leaving the couch? Researchers at Bell Labs have developed a camera and software that make such simulated worlds possible.

The demo I saw on the big screen at Bell Labs was a lot more pedestrian — a virtual tour of the lab's Multimedia Room, which is nothing more than a storage area for A/V equipment down the hall. What was intriguing was how the pictures were created.

Ingrid Carlstrom, director of Visual Communications Research, and Daniel Aliaga, a member of the Bell Labs technical staff, introduced me to their robot — a platform on wheels with a "plenoptic" camera for a head. ("Plenoptic" means "plenty of optics.") The omnidirectional lens saves video still images on the hard drive of a notebook computer at its feet. The remote-controlled



The networked home as envisioned by Edward Chen at AT&T's Shannon Labs uses an office-like local area network to distribute music, video, and telecommuting services to upgraded A/V components and computers.

DIAGRAM BY DMITRY SCHUDOVSKY

Edward Chen's demo room at Shannon Labs. As division manager of Research Initiatives for the AT&T facility, Chen has been testing Ethernet for the home at 100 Mbps. Already the standard for local area networks (LANs) in the office, home Ethernet could become an inexpensive way to connect all your audio and video devices.

Chen uses off-the-shelf A/V components, though in some cases they've been jerry-rigged with the lab's own circuit boards. The telltale sign in the back of a 27-inch Toshiba TV was an RJ-45 port, which looks like a fat phone jack. It was the entry point for an Ethernet connection. Projected on a wall screen behind us was Chen's PowerPoint presentation of a cut-away home in which every TV, receiver, and computer is on the network.

There was also an MPEG-2 decoder inside the altered Toshiba TV to convert the digital stream flowing through the Ethernet into a video signal the set could display. TV stations can be accessed as if they're Internet addresses. Near the TV, an off-the-shelf Yamaha A/V receiver was attached to a slim component that takes streaming audio off a network server in the basement or directly from the Internet and converts it into a conventional source the receiver can use.

Chen handed me a pen-based LCD remote control with a wireless LAN card. Walking around, I used the pen to move sliders on the remote's screen that signal the receiver to raise or lower the volume. Chen said a short-range wireless controller would let you run nearby devices without interfering with those on other floors.

In Chen's scenario, 100 Mbps is more than enough for family members to share, even if a child is watching TV in a bedroom while Mom is listening to the stereo in the living room and Dad is telecommuting to work from a computer in the den.

"Ethernet is cheap distribution," said Chen. But he admitted that the demo system still lacks in-home HDTV distribution. "I don't have it today," he said, "but I still have bandwidth left over to do it." Chen predicted that many homes will have this kind of system within five years.

Chen dismisses IEEE 1394 cables, a.k.a. FireWire or i.Link, as having too short a range for adequately wiring an entire home. Still, prototype FireWire A/V components have been on display at trade shows for the past two years, and pro-FireWire technologists abound. Not only does FireWire continue to resonate with high-tech companies like Sony, Philips, and Apple, but the

newest version of Windows — Windows XP — supports FireWire out of the box. David Waring, chief scientist at Telcordia Technologies in Morristown, admitted that FireWire until now was more useful within a room than for a home network, but that's about to change. Waring is helping to develop IEEE 1394b, which he calls "long-range" FireWire. "The home of the future is focused on video and 1394," he insisted.

Now, I'm sitting in a brightly lit diner along a Jersey highway trying to digest my glimpse of the future. Momentarily distracted by the pies and seven-layer cakes rotating in a refrigerated showcase, I realize that the technology of enticement hasn't changed much in a quarter of a century. Pies of tomorrow will be stacked in the same cold glass cases and taste much the same as these today. That certainly won't be true for the way home entertainment gets delivered, stored, and consumed in even five years. You can bet people won't be driving to the video store to rent a cassette. As for what they watch and listen, I wonder whether our tastes in movies and music will really change all that much. "Cheesecake," I tell the waitress.

S&V

DVD CONFIDENTIAL

IT'S ALL TRUE! (sort of)

40 sin-sational discs that reveal the skeletons lurking in Hollywood's lurid closet

by MATT ZOLLER SEITZ

W ilkommen! Bienvenue! Welcome! Salutations, readers of *DVD Confidential*. There's a nip in the air, and you know what that means: Halloween. Reddening leaves. Jack-o'-lanterns. Sca-aaa-aaaary stories.

What kind of stories, exactly? Well, my sweets, they come in two flavors: real ones and fake ones. These days I have trouble remembering which are which myself. But when they're printed on yellow paper, they all have the ring of truth.

They're dispatches from the underbelly of America. The stuff tabloid dreams are made of. Police-blotter silkscreens. Nightmare scenarios.

Nasty. Secretive. Violent.

Acts of God. Mistakes in judgment. Conspiracies. Desperate plots.

And all of these twisted tales are easily accessible through your DVD player, a way-back machine of unparalleled grace and persuasive power able to transport you into a shadowy netherworld of stars, starlets, money men, ink-stained media power-mongers, sex bombs, directors, crooners, bootleggers, Presidents, assassins, mad millionaires, and immortal rockabilly gods, all riding the same strip of light — moving pictures.

Dig it:

In 1927, Roscoe "Fatty" Arbuckle, the Chris Farley of his day, celebrated a brand-new \$3 million contract by staging a bally-hoo shindig up in San-Fran-Cisco for some 40 people, including one Virginia Rappe, sometime model, sometime actress. Fatty was a big, big star, a family-friendly slapstick dervish, but his funboy image

changed pronto after the party when friends of Rappe heard the young woman crying behind a closed door. She said Fatty stole one of the "p"s from her last name.

Soon after, Rappe was dead — done in, prosecutors said, by Fatty's own plus-sized attentions and the intrusions of a foreign object, which the coroner believed to be a champagne or Coke bottle. Even though Fatty was acquitted of all charges, he went on to become the textbook definition of unemployable. And his movies, exemplified by boisterous diversions like *Fatty's Magic Pants*, became impossible to watch without envisioning unspeakable acts. (He was allowed to direct a few pictures, though, under the name Will B. Goodrich.)

Fatty's lurid melodrama caused the whole world to revise its image of Hollywood from an endless party where dreams come true to something more like an orgy in the ninth circle of Hell. (You can check out Fatty's antics — the ones that can be shown, that is — on Kino's *Arbuckle & Keaton* DVDs.)

Chilled by the same icy winds that made the public's nose turn blue, the major Hollywood studios decided to regulate themselves before Washington did it for them. In 1930, they created a censorship office and put William Harrison Hays in charge. Hays and his cadre of scissors men became shadow producers on every flick. Their list of onscreen no-nos included lusty kisses, references to premarital sex and adultery, and putting a gun and a gunshot victim in the same frame.

The scouring of Hollywood's image continued behind the scenes as well. Studios marginalized or cut loose stars who kept showing up in gossip columns. But there was only so much they could do to

tame Tinseltown. American eyes couldn't help being drawn to all that nasty glitter.

ROSEBUD

Thanks to Hollywood, even America's most feared newspaper mogul, William Randolph Hearst, got wrapped in ugly headlines. In 1924, the press lord and his mistress, wannabe movie star Marion Davies, went for a cruise on Hearst's yacht with a gaggle of Hollywood types, including gossip columnist Louella Parsons and actor-director Charlie Chaplin — a scandal magnet himself thanks to his penchant for marrying very young women. (See 1993's *Chaplin*, Artisan, for the skinny.)

What exactly happened on that boat remains a mystery, but somehow one of the guests, writer/producer Thomas Ince, died. The official cause of death was acute indigestion. The rumor mill — of which yours truly is most certainly *not* a part — suggested that Hearst, an amateur trick shooter, caught Chaplin and Davies in the act and in a jealous rage opened fire, accidentally hitting Ince, after which the whole bloody event was covered up. Shortly afterward, Parsons was awarded a lifetime contract by Hearst. Coincidence? Or the forces of darkness repaying a favor? (A version of the nightmare yacht ride is recounted in the forthcoming Peter Bogdanovich movie *The Cat's Meow*, soon to be on DVD.)

For libel reasons, the Ince-ident didn't make it into *Citizen Kane* (Warner), the muckraking 1941 movie by New York theater wunderkind Orson Welles about a manipulative, loveless, Hearst-like newspaper tycoon with a no-talent mistress he was determined to transform into a star. (Hearst's pet name for Davies's pudendum did, however. Big hint: It has something to do with



snow.) Parsons, still a loyal Hearst employee at that point, blasted Welles before, during, and after the picture's theatrical run, and Hearst's newspapers refused to cover the film or even accept ads for it.

When *Kane* opened anyway — the film begins with a media baron breathing his last ("Mistah Hearst, he dead") — Welles was hailed for his imagination, showmanship, and adamantium cojones. But the movie wasn't a hit, and Welles, a maverick artist, had trouble making pictures in Hollywood from then on. He did, however, continue to serve as an inspiration to others, including director Ed Wood — at least according to Tim Burton's same-named 1993 biopic, where Welles gives Wood the pep talk he needs to make what many consider the worst movie ever, **Plan 9 from Outer Space** (Image). In 1979, Muppet master Jim Henson gave Welles a cameo in **The Muppet Movie** (Columbia TriStar) as a studio boss who funds the fuzzy heroes' musical extravaganza. It was the only time he was permitted to green-light a picture.

ENTER THE CHAIRMAN

Mr. Francis Albert Sinatra, golden-throated carouser and sometime movie star, is what we here at *DVD Confidential* call a genuine 20th-century historical through-line. His name appears at every level of American reality, from crime and sex to showbiz and politics. In the 1950s, the

skinny crooner from Hoboken, New Jersey, conquered Hollywood just as he'd conquered New York — despite (or perhaps because of) rumors of mob connections he did precious little to downplay.

In a career slump circa 1951, Sinatra got a coveted supporting role as scrappy Pvt. Maggio in the World War II epic **From Here to Eternity** (Columbia TriStar). The part won him an Oscar — but the rumor mill said Frankie snagged the role thanks to shadowy intervention from old friends back east. See **The Godfather** (Paramount) for an account of how to make studio bosses understand horse sense.

Frank became a big-screen superstar, palling around with hard-drinking movie god Humphrey Bogart and his young goddess wife, Lauren Bacall. Sinatra romanced Bacall after Bogie died — before he died, according to some — and appropriated the name of his well-lubricated celebrity entourage, the Holmby Hills Rat Pack, later abbreviated to the Rat Pack. Consisting of Dean Martin, Sammy Davis Jr., and Peter Lawford, among others, the Rat Pack made seven slapdash films. (Director Steven Soderbergh will offer up his remake of the most famous — **Ocean's Eleven**, Warner — in time for the holidays.) Their finger-popping hipster misadventures are recounted in the 1998 HBO picture **The Rat Pack** (A&E), which also touches on Sinatra's mutual platonic love affair with one John Fitzgerald Ken-

Out carousing one night, a drunken Frank Sinatra convinced an even drunker Joe DiMaggio to burst in on an adulterous Marilyn Monroe as she was making love. Unfortunately, they got the wrong room . . .

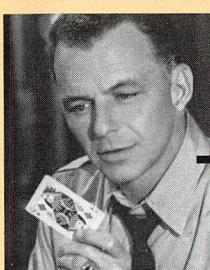
nedy — another one-man historical through-line for conspiracy mavens.

HOLE IN THE HEAD

In 1960, the boyishly handsome eldest son of bootlegging millionaire Joseph Kennedy became the first American President to ally himself with Hollywood glamour, cultivating a relationship with Sinatra that reverberated from D.C. to L.A. Kennedy's liberal politics played well with the affluent-with-a-conscience late-'50s electorate, and his made-for-TV good looks were catnip for the ladies.

Sinatra campaigned for Kennedy, even having one of his hit songs, "High Hopes" (the theme to **A Hole in the Head**, MGM, 1959), rewritten to praise the Democratic candidate. The men were brothers in macho glamour, sharing at least two mistresses — Mob moll Judith Campbell Exner, a plaything of gangster Sam Giancana, and blonde bombshell Marilyn Monroe, who sang a very suggestive "Happy Birthday" to Mr. President at his 1961 inauguration. (Worst-case-scenario buffs insist Mon-

History, Hollywood-style



FRANKIE



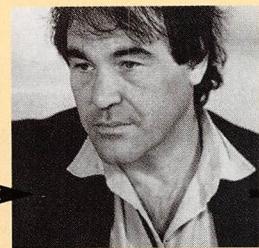
MARILYN



JACK



LEE



OLIE



ARTHUR

roe was offed by the CIA for knowing too much about government secrets.)

Frank kept carrying a torch for the Chief Executive even when Kennedy's brother, mobster-baiting attorney general Robert F. Kennedy, convinced the Prez not to stay with Frank at his house in Palm Springs — this after Frank had gone to the trouble of building Jack his own little vacation dream house. (If you want to relive this mortifying humiliation of one celebrity at the hands of another, it's in *The Rat Pack*.) Ten years later, Frank was stumping for Republican law-and-order man Richard Nixon.

Oddly, while Sinatra was hawking Tricky Dick, Elvis Presley was asking the Prez for credentials. During his increasingly bloated, self-destructive Las Vegas phase, the King made a trip to D.C. to persuade then-President Nixon to make him an honorary DEA agent — an event that should be placed in the dictionary next to "absurd" but which will have to settle instead for being depicted in the excellent Showtime comedy movie *Elvis Meets Nixon*.

Some say the King passed on in 1978, a pill-bloated waste case who cackled on the loo — but *DVD Confidential* knows different. Why, since that date, we can't go to the movies or watch TV without coming across some version of the King — the amiably kooky Elvis of *Heartbreak Hotel*, the ghost who can't find the right hotel room in *Mystery Train* (MGM), the macho, advice-dispensing hallucination of *True Romance* (Warner), the posse of gun-toting, casino-robbing impersonators in *3000 Miles to Graceland* (Warner). Elvis, Elvis, wherever you are: how can we love you if you won't go away?

A LITTLE SOLITAIRE

Twisty-turny, turny-twisty: As the '60s unfolded, life and art were braided together like a length of hanging rope. In 1962, Frank starred in *The Manchurian Candidate* (MGM), about a Korean War veteran (Lawrence Harvey) reprogrammed by Commies and rabid Commie-haters (it's too complicated to explain here, sports fans) to assassinate a Joseph McCarthy-

like anti-Red senator. The key to the killer's programming: a game of solitaire that reveals the queen of diamonds.

Knowing the bloody political subject matter was likely to alarm some of Jack's people, Frank angled for the Prez's okay. Turns out Jack was a fan of the book (or said so because he adored Frank), and filming proceeded. But when the President was shot dead in Dallas the following year by Lee Harvey Oswald (or so sez Earl Warren and friends), the flipped-out Frank withdrew the picture from circulation.

Kennedy's killing was the first of many haymakers to rock the increasingly dizzy U.S. political system — and the movies reflected viewers' discombobulation. Martin Luther King, Jr. and Jack's brother Bobby both got popped in 1968. By that point, the old Hays Code had been almost entirely dismantled, along with all the pesky content rules designed to reassure viewers that there was a moral order in the universe.

The screen was full of chaos: In the racially charged *Planet of the Apes* (20th Century Fox), rock-ribbed American white guy Charlton Heston did battle with humanoid gorillas who'd taken over a world leveled by a nuke-crazed establishment. A string of semi-satirical war adventures and revisionist westerns — *The Dirty Dozen* (Warner), *The Professionals* (Columbia TriStar), *Kelly's Heroes* (Warner) — portrayed soldiers as hard-bitten professional killers, more loyal to each other than to their country. The hippie biker heroes of *Easy Rider* (Columbia TriStar) got skeet-shot by rednecks. The goody-two-shoes middle-class housewife heroine of *Rosemary's Baby* (Paramount) carried Satan's child.

Through Satan and director Roman Polanski, Frank was tangentially connected to another great scandal: the Manson murders. Frank's third and youngest bride, milk-skinned waif Mia Farrow, played the title role in *Rosemary's Baby* — which hacked off the Chairman because he thought Mia should concentrate on being his wife. Not long after the film's release, wild-eyed hippie freak Charlie Manson — wannabe

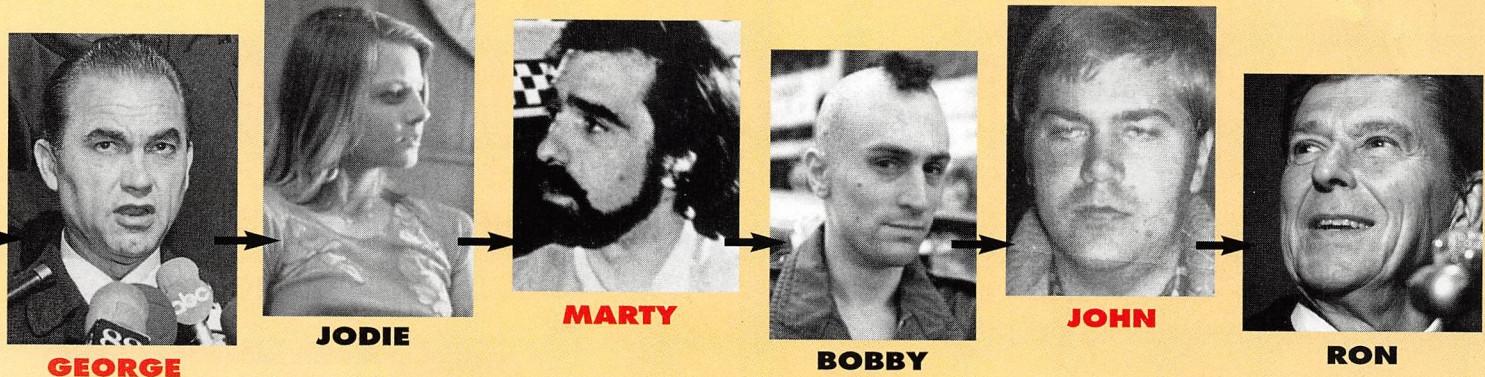
musician and sometime buddy of Beach Boy Dennis Wilson — decided it was time to start a race war in America, so he led his cult on a killing spree that claimed the lives of seven people, including Polanski's wife, Sharon Tate.

Tate's gruesome slaying coarsened Polanski's already pretty darn grim world view. His next movie, *Macbeth* — the goriest Shakespeare picture ever made — ends with a lopped-off head rolling down stone steps like an errant soccer ball. In 1974, Polanski made the definitive American conspiracy picture, *Chinatown* (Paramount), in which an evil millionaire rapes everything and everyone in sight. The millionaire was played, appropriately enough, by actor-director John Huston, who kick-started American noir 33 years earlier with *The Maltese Falcon* (Warner). Polanski himself played the runty little sadist who slits the hero's nostril for being too nosy.

In 1979, Polanski fled the country to beat a statutory-rape charge from a gleeful judge with a distaste for pint-size foreigners. Much of his work in the years following, like *Frantic* (Warner) and *Bitter Moon*, would tell the sad tales of men who went to foreign countries and got in dutch with the locals.

YOU TALKIN' TO ME?

The Hays prohibition against showing gun and gunshot victim in the same frame was rendered moot by average-citizen Abraham Zapruder's 8mm home movie of JFK's public murder and by graphic images of America's bloody expedition into a tiny Asian country called Vietnam, which showed off the vivid reds on consumers' brand-new color TVs. Moviegoers both recoiled from and found themselves strangely drawn to the decade-long onslaught of super-bloody American dramas — notably 1967's *Bonnie & Clyde* (Warner) and 1968's *The Wild Bunch* (Warner) — which treated human bodies like ducks in a shooting gallery. By the '70s, conspiracy was the preferred explanation for evil in America — most notoriously in 1974's *The Parallax View* (Paramount), about



GEORGE

JODIE

MARTY

BOBBY

JOHN

RON

a renegade investigative reporter (Warren Beatty) uncovering a government-sanctioned program to create assassins.

The hits just kept on coming. In 1972, race-baiting Alabama governor George Wallace's Presidential bid was ended by pistol-wielding loner Arthur Bremer, who recorded his tormented obsessions in a diary. Hundreds of miles away in L.A., Bremer's diary inspired film critic Paul Schrader to pen a script titled *Taxi Driver* (Columbia TriStar), which told the twisted tale of Travis Bickle, a deranged cab-driving loner who wanted to punish society for his demons. Like Charles Bronson's pacifist architect in *Death Wish* (Paramount), who turned stone killer to avenge a criminal assault on his family, Travis was an anonymous New Yorker lashing out at a world gone mad.

In *Taxi Driver*'s irony-sick finale, Travis aborts a planned hit on a Presidential candidate, kills a bunch of small-time hoods instead, and is proclaimed a hero by the press. In 1981, five years after the film came out, deranged loner John Hinckley tried to kill freshly minted President Ronald Reagan to impress *Taxi Driver* co-star Jodie Foster. In 1983, Bernhard Goetz, a gangly New Yorker with visions of *Death Wish* dancing in his head, unloaded a handgun on four young punks he said were trying to rob him on the subway. (In 1997, *Manchurian Candidate* director John Frankenheimer recreated the Bremer incident for TNT's *George Wallace*.)

REIGNING STONE

A strange sidelight to *Taxi Driver*, and the starting point of a whole different branch of the *DVD Confidential* art/life flowchart: the career of Vietnam vet turned filmmaker Oliver Stone. When *Taxi Driver* was being shot in New York circa 1975, Stone, then an NYU film student and struggling screenwriter, was paying the bills as a cab driver. He just happened to ferry the film's producer to the set one night and babbled that

he was a talented writer who'd win an Oscar one day. Four years later, while watching the Academy Awards on TV, the producer was astonished to see that same cabby accepting a statuette for writing the muckraking Turkish-prison sleazefest *Midnight Express* (Columbia TriStar).

Stone went on to win multiple Oscars for his biographical Vietnam war drama *Platoon* (MGM), then became America's foremost rabble-rousing leftist conspiracy monger. Among his more controversial opuses: *JFK* (Warner), an art/life hall of mirrors that implicates the Mafia, the Cubans, the CIA, the FBI, Lyndon Johnson, and the New Orleans gay underworld in the President's murder; and *Nixon*

tions, and everybody who entered the news became, ipso facto, a showbiz celebrity. In 1994, when O.J. Simpson went on a low-speed freeway chase after being charged with murdering his wife, he was a long-time ex-footballer, known wife-beater, and D-list actor whose best-known credits were the *Naked Gun* (Paramount) movies. (Good luck laughing at 'em now.) Yet the murder trial so absorbed the nation that O.J. became a horrifying superstar, bigger than any movie or music god — the Fatty Arbuckle of his day, a poster boy for the underbelly of success and a repository for America's deepest fears about celebrity.

The 2000 CBS miniseries *American Tragedy* (Vidmark/Trimark) mixed dra-

O.J.'s murder trial made him a horrifying superstar — the Fatty Arbuckle of his day

(Touchstone), an epic noir, modeled on *Kane*, that pushes into the same political darkness, suggesting that Nixon and his government cronies created a murderous intelligence network that was ultimately responsible for JFK's death.

THE TRUTH BE DAMNED

There's no business like show business, dear readers. After the '80s, it became the only business everyone in America cared about and understood. Box-office grosses and weekly TV ratings were published in every newspaper; Hollywood stories became front-page news. The decapitation by helicopter of actor Vic Morrow and two Vietnamese orphans during the making of 1982's *Twilight Zone: The Movie* — because director John Landis wanted bigger explosions and lower-flying choppers for his big war scene — proved to be a wake-up call for the out-of-touch-with-reality movie-brat directors, and was probably the most tragic example ever of auteur excess.

In the '80s and '90s, the news media was absorbed by entertainment corpora-

tizations with news footage, Stone-style, and recreated Simpson's criminal trial without ever showing his face — a real neat trick. Intriguingly, the miniseries was written and directed by filmmaker/journalist Lawrence Schiller, whose résumé includes designing the "Raindrops Keep Falling on My Head" montage for *Butch Cassidy and the Sundance Kid* (20th Century Fox), which pasted the actors into historical photographs. He also helped Norman Mailer with two books that blended fact and fiction: *The Executioner's Song*, about the execution of murderer Gary Gilmore, and *Harlot's Ghost*, an epic novel about the CIA. Schiller didn't invent the fact/fiction blur, but he helped show others how to do it. He bears some responsibility for Woody Allen's *Zelig* (MGM), *The Right Stuff* (Warner), *Forrest Gump* (Paramount), and countless other influential stories that freely intermingle history and entertainment, fact and fancy — a horrible, horrible practice to which this column pleads guilty, guilty, guilty!

Keep it confidential.

S&V

Multimedia Maven

The newest equipment, software, and Web sites

EDITED BY MICHAEL ANTONOFF



mp3 bridge

Have your MP3s and full-bodied stereo sound, too, with Harman Kardon's DAL 150 EzLink Digital Audio Transcoder (\$149), expected to be in stores in October. Attach the 3 3/4 x 1 x 2 3/4-inch device to the USB port of a PC running Windows 98 or higher, and it'll convert stored or streaming MP3 files into a stereo PCM bitstream that any A/V receiver with a coaxial digital audio input will accept. You can also use the DAL 150 to send MP3s to receivers with onboard MP3 decoders (several new HK receivers offer this feature). The DAL 150 is powered through the USB port and comes with an 18-inch USB cable and a stingy 3-foot audio cable. Harman Kardon says the device could be upgraded to handle other formats like Windows Media Audio (WMA) or RealAudio, but it has no firm plans yet to offer a download or disc upgrade.

Harman Kardon 800-422-8027, www.harmankardon.com

britney 360

We could have shown you Enroute's special camera with lenses pointing in eight directions — for shooting concerts and sporting events with a seamless 360° panorama — but you can't buy one anyway, and we'd have had to shrink Britney Spears, which would be a crying shame. Early in 2002, though, you should be able to see Spears perform in the round when her FirstPerson Immersive (as Enroute calls it) interactive music video (still not titled or priced) is released for

PlayStation 2. You can zoom in on her navel (but not her butt, since the camera's in front of her), and fans in the first few rows will be able to watch themselves watching Britney throughout the concert. Non-Britney fans can look forward to panoramic videos from other pop stars, but Enroute wouldn't say which ones will get the 360° treatment.

Enroute 650-843-1122,
www.enroute.com



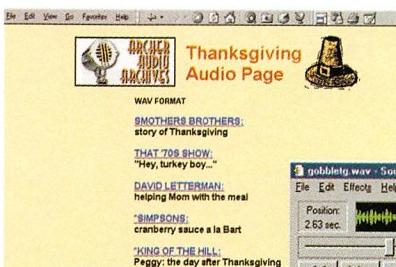
something about harry

The hype for *Harry Potter and the Sorcerer's Stone*, opening in movie theaters November 16, began building this summer with help from a multimedia-enabled Web site, harrypotter.com. You'd think eerie sound effects, animations, and trailers for J. K. Rowling's magical world would be enough. But there's also the franchise to consider, which is why the site can instantly whisk you to K-mart (bluelight.com), where Potterheads receive 25% off on Quidditch card games from Mattel. Presto! With the click of a mouse, you go from being a Harry Potter fan to an owner of Harry Potter-licensed merchandise.

kids' play?

Knowledge Adventure's Scan-Command: Jurassic Park (\$50), aimed at kids as young as 8, bundles a handheld scanner with the new PC game's CD-ROM. According to a publicist, children will be encouraged to play in supermarket aisles while their parents shop, scanning in bar codes from soda, cereal, and other goods. When the kids upload the codes through the PC's serial port, some are turned into "pieces of DNA" that cause the game's dinosaurs to grow stronger. By accumulating enough DNA, a kid can defeat an evil scientist and save the dinosaurs. The company says the most valued bar codes are randomly selected and product placements aren't for sale, but Madison Avenue is more subtle than that. Knowledge Adventure 800-545-7677, www.scan-command.com





turkey nation

Jokes about the day Americans pig out abound on TV in November, and now you can hear a selection

of the funniest at archervalerie.com/tgiving.html. Turkey boners include clips from *That '70s Show*, *The Simpsons*, and *The Late Show with David Letterman*. Letterman, for instance, quips: "When you're sitting around the Thanksgiving table, do you actually mean it when you say, 'Mom, can I help you with anything?'" All the clips, including the telltale gobblets of live turkeys, are WAV files. Pass the Tums, please.

furniture plotter

A utility called TimeSlips that let professionals bill clients by the minute became an early hit on the IBM PC. Its creator, Mitchell Russo, sold off the program years ago. Now he's back in slipcovers, so to speak, by heading up a Web site that attempts to make furniture shopping easier. Say you're looking for a leather couch or an oak entertainment center. You go to FurnitureFan.com and sort through its photo catalog and descriptions of products from different manufacturers. Instead of buying online, you type in your Zip code to get the names of stores within driving distance of your home.

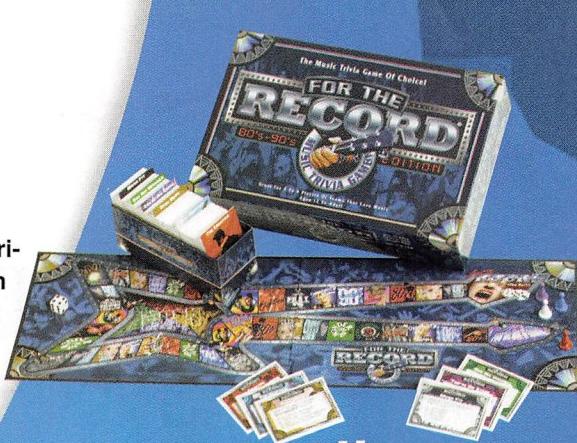
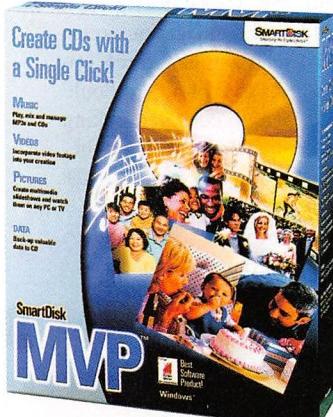
FurnitureFan 800-826-8868, www.furniturefan.com

poor man's dvd-r

If you want to share your home video productions with family and friends, but can't afford a DVD recorder, you might be interested in SmartDisk MVP (\$90). The "MVP" stands for music, video, and pictures, and the software creates MPEG-1 Video CDs. The picture resolution is closer to VHS than DVD, and playing time is limited to about an hour per disc, but they're cheaper to mail than cassettes, and you never have to rewind them. You'll need a PC

equipped with a CD recorder and Windows 98 or above. By the way, SmartDisk MVP is the program to get if you want Windows XP-like multimedia capabilities without actually upgrading to XP.

SmartDisk 941-436-2500, www.smartdisk.com



so many questions

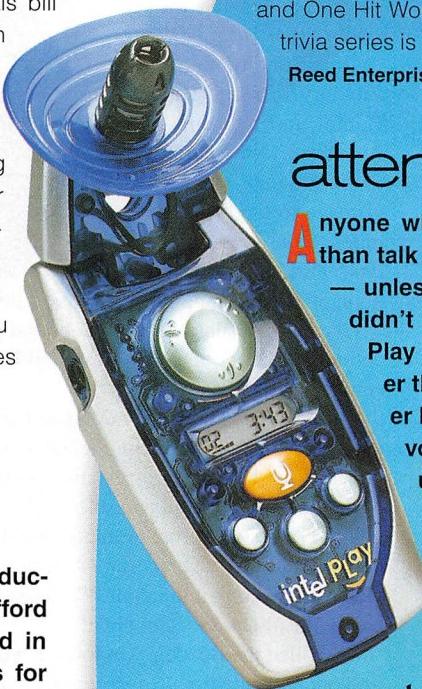
What previously live artist had an album called *Live Alive?* a) Kurt Cobain, b) Tupac Shakur, c) Benjamin Orr, or d) Stevie Ray Vaughn? Even if you don't appreciate the irony but answered, "d," you advance in the board game *For the Record* (\$30). With 800 multiple-choice questions on cards divided into such categories as Real Name and One Hit Wonder, this newest edition of the entertainment trivia series is geared to music from the '80s and '90s.

Reed Enterprises 888-597-7333, www.fortherecord-game.com

attention: kids

Anyone who'd sooner disguise his or her voice than talk naturally probably has a criminal record — unless, of course, you're a kid and wish you didn't always sound like one. Enter the Intel Play Computer Sound Morpher, a \$49 recorder that detaches from a Windows 95 or higher PC and lets you turn the most melodious voice into one sounding so gravelly and unearthly that even the FBI would be fooled. You can also add echo or ballpark effects and e-mail your sound morphs to friends and relatives.

Intel www.intelplay.com



train challenged

I thought a massive train wreck might give our PC's subwoofer a workout, which is why I installed *Train Simulator* (\$55). Alas, I couldn't so much as pull the Acela, America's answer to Japan's Bullet Train, out of the station. The help menu didn't list a command for Go, and I wasn't about to call Microsoft, since I was still embarrassed over my failure to master *Flight Simulator*. But the *Train Simulator*'s demo mode looked great. If I ever get the throttle to work, I could easily imagine taking it on a laptop aboard the Acela from Washington to New York City and saying to fellow passengers, "Gee, doesn't the scenery on the screen look familiar?" Microsoft www.microsoft.com/games/trainsim



The Right Direction

For me, using navigation on the road has become a way of life. The DVD-based Alpine NVE-N851A PowerNav navigation system that I first tested last year ("GPS, I Love You," June 2000) has become a permanent fixture in my '98 Explorer — I can't imagine getting by without it.

Early this past August, for instance, I piloted the Explorer on a four-day, 730.6-mile round-trip tour from my home on the New Jersey coast to Annapolis, Maryland, and Richmond and Arlington, Virginia. The itinerary: a pair of small-club dates featuring my favorite singer/songwriter, Gordon Downie, with a visit to a close

friend I hadn't seen in five years sandwiched in between. The lowdown: the Alpine nav system got me to each waypoint safe, sound, and on time. Not once

during my one-man mini caravan did I feel unsure of where I was going, nor did I need to consult a paper map because the nav system went astray. Yes, I'd brought along directions from Mapquest.com as backup, but I never used them.

Naturally, I jumped at Kenwood's offer of first-shot, exclusive dibs on testing its KNA-DV2100 DVD-based navigation system (\$2,500). I'd previewed the system at the Consumer Electronics Show in Las Vegas last January and was impressed with its major selling point: touchscreen operation with the companion in-dash Excelon KVT-910DVD head unit (\$2,800). It's as simple as it sounds: touch the screen, and you can instantly access functions, maps, points of interest — the works.



Kenwood made a silver 2001 VW Beetle available for my week-long test. I enlisted *Mobile Entertainment* assistant editor Daniel Sozomeno to be the designated

driver while I rode shotgun so that I could focus on using the touchscreen. Not to worry if you're the only person in the car: you can input your destination while in park, and vocal prompts will direct you to where you need to go (most touchscreen functions are prohibited while the vehicle is in motion).

One Sunday in late July, my wife and I met Daniel and a friend in Aberdeen, New Jersey, to commence our pilgrimage to the beach 21 miles to the south in Asbury Park for an afternoon of fun and sun.

Okay, so the day was actually a bit cool and somewhat overcast, but that didn't deter us from our sacred mission. In the mood for a continental vibe, I punched up the language-selection portion of the navigation menu and selected "English (UK)" so our verbal prompts would be delivered in a British accent. (And no, we weren't expecting it to intone, "You are the weakest Cul-De-Sac. Goodbye!")

We rolled the Beetle's windows down to find out how intelligible the prompts would be over road and wind noise (as well as passenger chit-chat). We were able to hear the prompts, but sometimes the noise made it difficult to make out all the instructions.

The 6½-inch screen on which maps and other information was displayed was bright and quite legible, and especially clear for off-axis viewing. Those are decided pluses in my book, as I've dealt with way too many screens (Alpine's included) that just aren't bright enough in overcast conditions or around twilight.

The Kenwood touchscreen was intuitive and easy to use. For example, if I pressed on a spot away from the route's directional cursor, after 5 seconds the screen automatically scrolled to the point I was touching, which then became the center of the map.



Mapper's delight: The Simulation Run option of Kenwood's DVD-based navigation system demos the entire plotted course of Mettler's Sunday-at-the-beach trip.

That's cool. I also dug the split screens. If a fork appeared in the road, it was enlarged to the right of the main map so I could see more easily which part of the fork we were supposed to take, as well as get a better sense of twists and turns in the road ahead — things you sometimes can't see until you're right on top of them. And our British-accented vocal prompts came early and often enough that Daniel didn't have to take his eyes off the road.

With all that help, we made it to the beach and back without a snag (and, unfortunately, without much sun). We took several other trips during the test week and found the Kenwood nav system up to each of them. In sum, the KNA-DV2100 is a bold step forward in the navigation arena. Its logical, user-friendly touchscreen options and well-timed vocal prompts should get many more drivers to consider making navigation part of their everyday on-the-road routine.

S&V

Mike Mettler, editor in chief of Car Stereo Review's Mobile Entertainment, never even considered titling this column *Greetings from Asbury Park, N.J. Honest.*

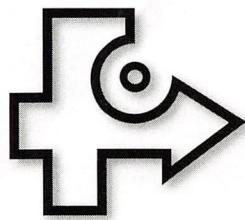


The Ultimate in A/V Personalization.

Alpine just put a lot more "me" in multimedia. Because with Alpine's customizable Mobile Multimedia system, you build your own rolling entertainment empire with only the components you want. From wide-screen monitors to a TV tuner to satellite-linked navigation to, yes, our new six-disc DVD changer. Everything you'll need and nothing you won't. All with Alpine's legendary audio quality. Or you could just get an off-the-rack system like everyone else. Yeah, right.



ALPINE
www.alpine1.com



movies

entertainment



FORREST GUMP

Paramount

Movie ★★★★

DVD ★★★★

This bittersweet tale of a boy from Alabama who manages to succeed despite his dim wits became the runaway hit of 1994, winning Oscars for Best Picture, Best Actor, and Best Director. *Forrest Gump*'s movements in the world, more reaction than action, allow him to be at nearly every important event of the 1960s and '70s. Besides getting to meet three Presidents, Abbie Hoffman, and Elvis Presley, he is on hand for Watergate, invests in a new technology called the personal computer, and even helps create that famous smiley face.

Forrest Gump has actually grown better with time. When director Robert Zemeckis had his special-effects wizards marry actual footage of the decades' icons with new shots of Gump, thereby allowing us to see the real John Kennedy shake Gump's hand or the real John Lennon sitting next to Gump on *The Dick Cavett Show*, it was quite a startling distraction. Now that this technology has become commonplace, we can concentrate on the simple, moving story and on the magnificent acting of Tom Hanks, Sally Field, and Gary Sinise.

The DVD transfer is state of the art, with sharp, clean images of wonderful color and texture. Sound is excellent, too; the Vietnam battle scenes will give your home theater gear a healthy workout. But the extras on

this two-disc set are a mixed bag. There are two commentaries — one by Zemeckis, producer Steve Starkey, and art director Rick Carter, the other by producer Wendy Finerman — but after listening to the first, the second seems redundant. So does the documentary *Through the Eyes of Forrest Gump*, which elaborates further on the same basic facts. The production featurettes, however, are another story, containing some of the best supplemental material on DVD. Here you can find out how all the special effects were done, see screen tests, and view entertaining tutorials on makeup, sound, and design. **English, Dolby Digital 5.1; French, Dolby Surround; letterboxed (2.35:1) and anamorphic widescreen; one single-layer and one dual-layer disc.**

— Rad Bennett

SNOW WHITE AND THE SEVEN DWARFS

Disney

Movie ★★★★★ DVD ★★★★★

It's fortunate that Disney intends to release only one of these Platinum Edition DVDs of a classic animated film per year, because the double-disc sets could seriously deplete your spare time. As seen here, *Snow White and the Seven Dwarfs* is a movie you'll want to watch over and over again. Its restoration and the THX-supervised transfer have created a picture that's virtually perfect. Contrast is excellent, providing deep blacks and intensely rich colors, which are beautifully combined. Detailed images of characters moving through the multilevel backgrounds have a three-dimensional quality

without compromising the look of a storybook illustration in motion. All is bright, clean, and completely free of film grain, scratches, or other damage. The emotive score helps pull you into the enchanting story, and the refurbished soundtrack, tastefully remixed in Dolby Digital 5.1, fills the room nicely. There isn't much separation of instruments or movement of sounds, but music and voices are full and natural.

As to the voluminous extras, I recommend watching the documentary for an overview and then taking Angela Lansbury's sampling tour of the supplements. Disc 1 contains a Walt Disney commentary cobbled together from old interviews, a *Silly Symphony* short, an interactive-quiz/theme-park ride, and Barbra Streisand's rendering of "Some Day My Prince Will Come," recorded just for the DVD. Disc 2 covers every aspect of the creative process, presenting five areas to explore, each branching off into multiple subsections. You'll find deleted songs, animation in progress, and completed yet discarded

STAR SYSTEM

Stellar	★★★★★
Excellent	★★★★
Good	★★★
Fair	★★
Poor	★

Movie refers to the original film.

DVD refers to the film's presentation on disc, including picture and sound quality as well as extras.

scenes. You'll also find histories of the Disney studio, archival shorts, broadcast clips, and galleries. Everything is organized to be fun, and it's presented in virtual habitats that allow continual submersion in Snow White's world. Like the film itself, this set is a meticulously planned and executed, no-expense-spared labor of love. *Snow White and the Seven Dwarfs* is a must-have DVD that will enrich any collection. **English, Dolby Digital 5.1 and mono; French, Dolby Digital 5.1; full frame (1.33:1); two dual-layer discs.** *Josef Krebs*

Editor's note: For more on the *Snow White* DVD, see "Snow White Lives!" on page 98.

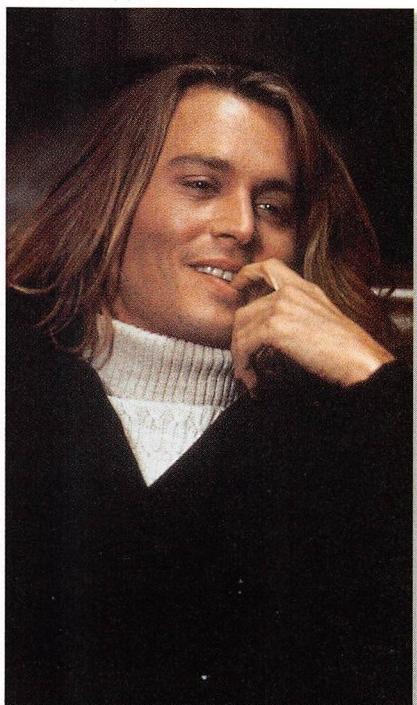
BLOW

New Line

Movie ★★★ DVD ★★★★

Since *Blow* is the story of George Jung as seen through his eyes, you would expect it to be sympathetic — despite his being a major cocaine dealer. But director Ted Demme jettisons the film's credibility entirely by presenting Jung as little more than a thrill-seeking family man who allied himself with the wrong people and was ultimately persecuted simply for doing business the American way. In Demme's hands, even Pablo Escobar, the vicious Colombian drug lord, is just a good ol' boy with a mean streak. Still, it's an entertaining movie that includes some great pathos-induc-

Johnny Depp, Blowin' in the wind



ing set pieces. Johnny Depp turns in yet another great performance, imbuing Jung with a countercultural bent and just the right touch of existential resignation.

The DVD transfer is just fine, with crisp colors and plenty of detail. The real value, however, lies in the extras package, which includes deleted scenes, a documentary examining cocaine's effect on Colombia, and a commentary by Demme and Jung. You also get a DVD-ROM screenplay-to-scene feature and a telling 20-minute interview with Jung in prison. Through it, we learn that the director and his subject became soul mates over the course of the film — which goes a long way toward explaining its major flaw. **English, Dolby Digital 5.1 and Dolby Surround; letterboxed (2.35:1) and anamorphic widescreen; dual layer.** *Marc Horowitz*

CHOCOLAT

Miramax

Movie ★★★ DVD ★★★★

Set in the late 1950s, *Chocolat* tells of a small French town that has become set in its miserable ways, controlled by the local Count (Alfred Molina), whose roots go back centuries. Late one winter night, Vianne (Juliette Binoche) blows in on the North wind and opens a chocolate shop. The people who eat the goodies she makes find their inhibitions dissolving as their passions rise to the surface. And, of course, the village begins to change.

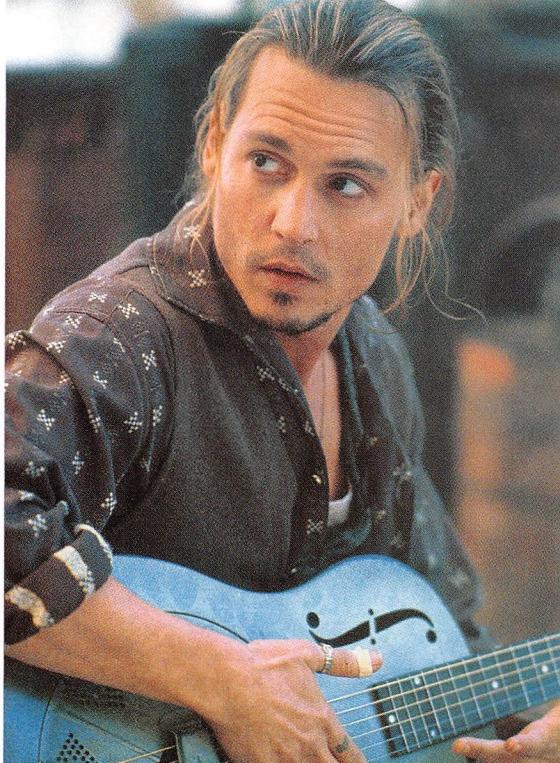
This agreeable if overlong fable has been given a very good DVD transfer. Textures seem to leap from the screen, and the food looks good enough to eat. The surround channels are well used to help create atmosphere. The modest array of extras is satisfactory, including interesting deleted scenes, informative discourses on the costumes and settings, and an unusually literate commentary by the director and producers. **English and French, Dolby Digital 5.1; letterboxed (1.85:1) and anamorphic widescreen; dual layer.** *Rad Bennett*

TRAFFIK

Acorn Media

Movie ★★★★ DVD ★★

As original as it was, director Steven Soderbergh's multi-Oscar-winning *Traffic* was actually based on *Traffik*, a 5½-hour miniseries made for British TV in 1989. Both are now available on DVD, setting up a comparison that actually makes each look good. While Soderbergh's film is a kaleidoscopic view of the futility of the war on drugs, the miniseries is a far more personal work that has time to delve deeply into the story's characters. And where *Traffic* focuses on Mexico



Johnny Depp, deep in *Chocolat*

as a source for drugs, *Traffik* takes us to Pakistan, which provides 80% of London's heroin. Here we see firsthand the plight of farmers who can grow nothing but the weedlike poppies in their hopelessly depleted fields.

Viewers look to British TV for thoughtful content — not the high production values afforded by Hollywood budgets — and *Traffik*, with its dingy look and repetitive score, is no exception. But even accepting these limitations, this two-disc set's transfers are a disappointment. The picture is so soft and grainy, you'll wonder if it's better on videocassette. So rent the DVD before buying it if you can — just don't miss this extraordinary series. **English, Dolby Digital stereo; full frame (1.33:1); two dual-layer discs.** *Ken Korman*

15 MINUTES

New Line

Movie ★★ DVD ★★★★

With its capable cast of actors and a director who knows how to stage baroque scenes of urban mayhem, *15 Minutes* should have been a good action film. It gets bogged down, however, by an embarrassingly puerile message about the media's complicity in violent crime, which leads me to ask: who writes this stuff? On DVD, the mess isn't helped any by the lame extras prominently featuring tabloid TV producers and personalities — people hardly qualified to talk objectively about their profession.

Turn down your brain a few notches, however, and you might actually enjoy *15 Minutes*. The film's Dolby Digital 5.1 soundtrack rocks throughout, delivering a three-dimensional sonic environment with bone-rattling bass. Hardly a second passes without some level of activity in the surround channels (although the effects occasionally consist of

gratuitous sonic noodlings). The image quality is also excellent. Black levels look extremely solid, and colors are vibrant. With the exception of a few scenes where the actors' faces look inexplicably orange, flesh tones are natural. Additional extras include a director's commentary, deleted scenes, and a DVD-ROM screenplay-to-scene feature. **English, Dolby Digital 5.1 and Dolby Surround; letterboxed (2.35:1) and anamorphic widescreen; dual layer.**

Al Griffin

POLLOCK

Columbia TriStar

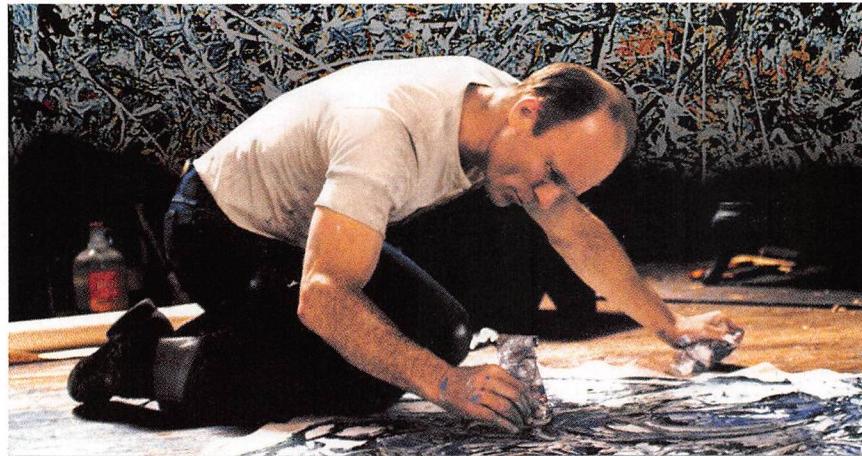
Movie ★★★ DVD ★★★★

Pollock was a true labor of love for star and first-time director Ed Harris, who spent a decade bringing this biopic of abstract-expressionist painter Jackson Pollock to the big screen. This is evident in how carefully the film is constructed and how beautifully it's acted. (Harris and co-star Marcia Gay Harden — who plays Lee Krasner, Pollock's wife and fellow painter — each received an Oscar nomination.) The film probably overemphasizes Pollock's personal demons, as it sometimes feels like the all-too-familiar tale of a tortured, emotionally unbalanced artist who gradually disintegrates before our eyes. But ultimately, this is the story Harris had to tell.

The DVD has no such flaws. The image is crisp and richly textured, best seen in the film's paintings (more than 200 works stunningly recreated on canvas just for the movie). A 20-minute documentary is appropriately sober and informative, and in both his interview with Charlie Rose and his commentary, Harris displays the intelligence that sets him apart from so many actors and may herald the start of an illustrious directorial career. **English, Dolby Digital 5.1 and Dolby Surround; letterboxed (1.85:1) and anamorphic widescreen; dual layer.**

Ken Korman

Never mind the Pollock: Ed Harris lays it on thick as the tempestuous painter



MY MAN GODFREY

Criterion Collection/Home Vision

Movie ★★★ DVD ★★★★

SULLIVAN'S TRAVELS

Criterion Collection/Home Vision

Movie ★★★★ DVD ★★★★

The screwball comedy was one of the few bright spots of the Great Depression. Amazingly, Hollywood filmmakers of the time managed to blend themes of poverty and injustice with laughs, producing classic comedies with a conscience. *My Man Godfrey* (1936) is a prime example, its plot concerning a zany deb's scavenger hunt for a "bum," who later becomes the family butler and savior.

Because the movie had fallen into public domain and previous video releases ranged from okay to abysmal, Criterion conducted its own scavenger hunt, unearthing near-pristine film elements. The gorgeous DVD transfer, shimmering in the movie's original silky black-and-white, finally allows viewers to fully enjoy the grand shenanigans of the fabulous cast, led by William Powell and Carole Lombard, beautifully directed by Gregory La Cava. And there's a fine package of extras, highlighted by the leading actors' 1938 reprise for Lux Radio Theater, a commentary by film historian Bob Gilpin, and a brief selection of outtakes — verifying Lombard's reputation as someone who could make a truck driver blush.

Writer/director Preston Sturges was at his peak when he unleashed *Sullivan's Travels* (1941). This brilliant satire — about a serious-minded comedy director's trek among the common folk, searching for the great American drama — kicked the Depression in its tail end with a plethora of pratfalls and a barrage of great dialogue. The film looks spectacular in this sparkling new DVD transfer, created from a 35mm duplicate negative, and the extras amount to a cinematic archive of delights. These include the complete 76-minute PBS *American Masters* documentary on Sturges,

Hedda Hopper's interview with the director, and a commentary. You also get recordings of Sturges singing his own musical compositions, interviews with his widow, and storyboard and stills galleries. **Both: English, Dolby Digital mono; full frame (1.33:1); dual layer.**

Mel Neuhaus

CITY ON FIRE

Dimension

Movie ★★★ DVD ★★★

THE DUEL

Tai Seng

Movie ★★★ DVD ★★★

These two Hong Kong action films could not be more different, but they're first-rate samples of their respective genres. *City on Fire* (1987) features the wonderful (and then little-known in the U.S.) Chow Yun-Fat as a cop on the edge, but don't expect much in the way of the balletic and stylized action sequences he usually performs for director John Woo. Instead, this is a generally realistic crime flick with a distinctly 1970s American flavor, heavy on the graphic violence; it will thus come as no surprise that Quentin Tarantino appropriated a couple of dramatic sequences here for his own *Reservoir Dogs*. The DVD transfer is from a splendid-looking print, but the dubbed English voices are often laughably bogus-sounding. And the Dolby Digital 5.1-channel mix, while effective, has music and sound effects that are way too obviously rerecorded years after the fact.

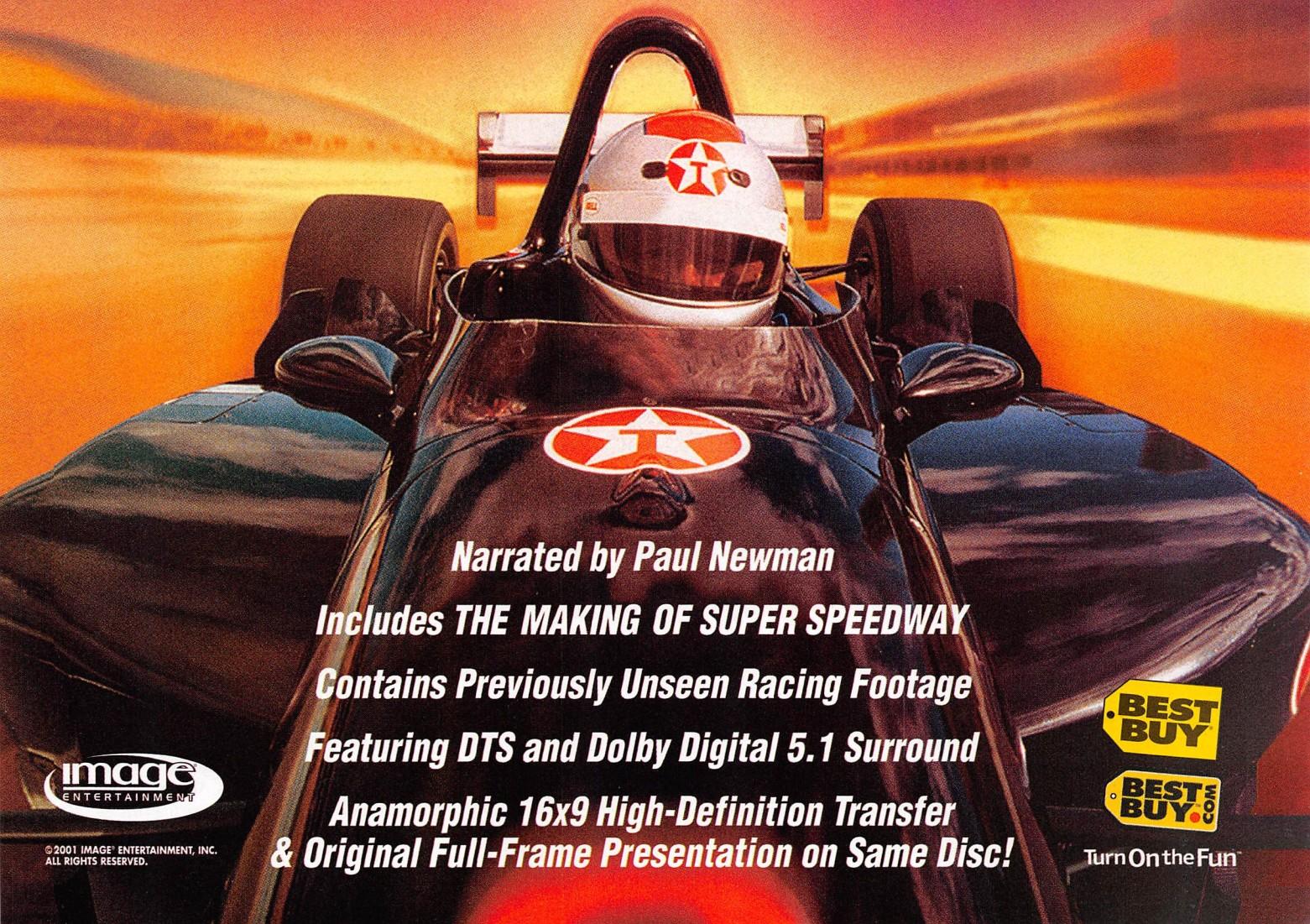
The Duel is something else altogether; in fact, it rather defies description, except to say that's it's sort of like *Crouching Tiger, Hidden Dragon* on rather potent mushrooms. There are gorgeous Chinese locations, incredible camera moves, and stunning computerized effects. There are also insanely choreographed sword fights, hilarious and deliberate anachronisms (it's safe to assume the word "paparazzi" was never actually spoken during the Ming Dynasty), and some of the hammiest overacting since Wallace Beery. And all of it is in the service of an utterly incomprehensible plot having something to do with a duel between master swordsmen in the Forbidden City. It's quite beautiful and quite ridiculous in just about equal measure, and you should see it immediately.

The DVD transfer is great, with a particularly impressive 5.1-channel mix on the Cantonese language track. Extras include a making-of featurette, a music-and-effects track, and an informative commentary. For maximum surreal fun, I recommend watching it again in dubbed English with the English subtitles, since the two translations often totally contradict each other. **City on Fire: English, Dolby Digital 5.1; letterboxed (1.85:1) and anamorphic widescreen; single layer. The**

**DVD's Premier Demo Disc
Just Went MACH II...**

SUPER
SPEEDWAY

THE 2001 SPECIAL EDITION



Narrated by Paul Newman

Includes THE MAKING OF SUPER SPEEDWAY

Contains Previously Unseen Racing Footage

Featuring DTS and Dolby Digital 5.1 Surround

*Anamorphic 16x9 High-Definition Transfer
& Original Full-Frame Presentation on Same Disc!*



©2001 IMAGE ENTERTAINMENT, INC.
ALL RIGHTS RESERVED.

Turn On the Fun

Quick Fixes

BATMAN: THE MOVIE (1966)

20th Century Fox

Movie ★★★★ DVD ★★★★

The undying wit and charm of *Batman* — the classic live-action TV series of the mid-1960s — shine through the big-budget gadgetry here. The film's first-ever Dolby Digital stereo mix adds depth to the sound, and the transfer's colors are so brilliant that stars Adam West and Burt Ward repeatedly interrupt their wonderfully droll commentary track to marvel at them. Other extras include two featurettes and two stills galleries. **English, Dolby Digital stereo and 2-channel mono; French, Dolby Digital 2-channel mono; letterboxed (1.85:1) and anamorphic widescreen; dual layer.** Ken Korman



THE DAY THE EARTH CAUGHT FIRE

Anchor Bay

Movie ★★★★★ DVD ★★★★

This 1961 end-of-the-world sci-fi gem, set largely in a London newsroom and blending equal amounts of sarcasm and terror, resembles a Ray Bradbury version of *The Front Page*. It arrives on DVD in a blistering new widescreen B&W transfer with the long-lost burnt-orange-tinted opening and closing scenes restored. Included is a stills gallery and a wonderful anecdotal commentary by producer/director/co-writer Val Guest touching on controversy, censorship, and CinemaScope. **English, Dolby Digital 2-channel mono; letterboxed (2.35:1) and anamorphic widescreen; single layer.** Mel Neuhaus

DOCTOR WHO

BBC/Warner

Series ★★★ DVDs ★★★

This eccentric BBC TV sci-fi series, which started in the 1960s and still continues through time, is being launched on DVD with three releases, each containing a four-episode story. *Spearhead from Space* is an apocalyptic tale of an invasion by aliens disguised as store mannequins. *The Five Doctors* brings together actors who have played Doctor Who over the years (supposedly his different manifestations) for one mind-bending adventure. *The Robots of Death* wasn't available at press time. Picture and sound aren't stupendous, but they never were. Both DVDs come with commentaries, *The Five Doctors* also with a separate track of the memorable electronica score. **English, Dolby Digital 5.1; full frame (1.33:1); dual layer.** Josef Krebs

WAITING FOR GUFFMAN

Warner

Movie ★★★★ DVD ★★★

Christopher Guest, the memorably clueless lead guitarist of *This Is Spinal Tap*, returns as an equally clueless Broadway hack in this hilarious 1996 satire of small-town amateur theatrics. Like *Tap*, this is an insider's parody, done with real affection for its hapless protagonists (played by the likes of Eugene Levy, Catherine O'Hara, and indie goddess Parker Posey). Also like *Tap*, the score straddles the thin line between clever and stupid with amazing aplomb. Picture and sound are first-rate, and extras include deleted scenes and an uninspired commentary. **English, Dolby Surround; letterboxed (1.85:1) and anamorphic widescreen; single layer.** Steve Simels

THE STEPFORD WIVES

Anchor Bay

Movie ★★★★★ DVD ★★★★

This 1975 adaptation of Ira Levin's thriller about oddly subservient Connecticut housewives became a cult classic and its title a part of the language. Its well-deserved silver-anniversary DVD has a glossy widescreen transfer (comparing very favorably with the unrefurbished accompanying trailer) and a soundtrack that, despite its rather flat mono score, is crystal clear. There's an excellent featurette, which includes reminiscences from the cast. **English and French, Dolby Digital 2-channel mono; letterboxed (1.85:1) and anamorphic wide-screen; dual layer.** Frank Lovece

THE GOONIES

Warner

Movie ★★★ DVD ★★★

This energetic family adventure, in which a group of young misfits sets out to find pirate treasure, has received a very good DVD transfer, with clear images and an appropriately rambunctious 5.1-channel mix. The extras include a rowdy commentary by the now grown-up cast and director Richard Donner, a 1985 making-of documentary, riotous outtakes, and a delightfully kooky Cyndi Lauper music video. **English, Dolby Digital 5.1 and Dolby Surround; French, Dolby Surround; Spanish, Dolby Digital mono; letterboxed (2.35:1) and anamorphic widescreen; dual layer.** Rad Bennett

JOSIE AND THE PUSSYCATS

Universal

Movie ★★★ DVD ★★★

We shouldn't expect much from a movie based on a bad Hanna-Barbera cartoon series from the 1970s, and the terminally fluffy *Josie and the Pussycats* demonstrates why. The miserable extras — so-what deleted scenes, a weak documentary, and the dullest director/producer commentary ever — certainly don't help. At least all those eye-popping colors and power-pop tunes burst from the first-rate DVD transfer. **English, Dolby Digital and DTS 5.1; French, Dolby Digital 5.1; letterboxed (1.85:1) and anamorphic widescreen; dual layer.** Ken Korman

Duel: Cantonese, Dolby Digital 5.1; English and Mandarin, Dolby Digital 2-channel mono; letterboxed (1.85:1); dual layer. *Steve Simels*

MOSCOW DOES NOT BELIEVE IN TEARS

Kino

Movie ★★★ DVD ★★★

TCHAIKOVSKY

Kino

Movie ★★★ DVD ★★★★

Moscow Does Not Believe in Tears (1979) is the saga of three young roommates in a workers' dormitory and their travails in life and love. What makes it unusual — and a huge hit at home as well as a Best Foreign Film here — is its surprisingly colorful portrayal of ordinary life in the then Soviet capital. *Moscow* is very much at its best when depicting the everyday: working, shopping, family celebrations, and so forth. The story line itself is on the soapy side, and it does run on, but the acting is excellent.

Tchaikovsky (1971) is an example of a kind of large-scale moviemaking that has virtually disappeared, with huge sets, grand vistas, and lavish appointments. The script is another matter, a sketchy biography of the composer (portrayed as morbidly lonely, his homosexuality scarcely hinted at) that's saddled with 19th-century dramatic elements. The movie is compulsively watchable for its first half, especially the strange sequence about Tchaikovsky's disastrous marriage (Innokenty Smoktunovsky, the star, is especially good here). But the second half bogs down badly in turgid fiction about the composer's relationship with his famous patroness, Nadejda von Meck. Throughout all this, though, there is the great music.

Moscow's full-frame transfer is from a grainy source print. *Tchaikovsky* is presented in all its CinemaScopic glory from a print whose color is just starting to deteriorate. Both films have been remixed in Dolby Digital 5.1 to mostly pleasing effect. Each double-disc set includes interviews, short documentaries, and stills galleries. **Both: Russian, English, and French, Dolby Digital 5.1; two dual-layer discs.** *Moscow:* full frame (1.33:1). *Tchaikovsky:* letterboxed (2.20:1). *Sol Louis Siegel*

THE GIFT

Paramount

Movie ★★★ DVD ★★★

Visions of sugarplums do not dance in Annie Wilson's head. Instead, she sees visions of a sluttish, small-town society girl who winds up fish food at the bottom of a Georgia pond. Annie (Cate Blanchett), apparently endowed with a psychic gift, holds readings to make ends meet. When the hot-to-trot fiancée of a school principal disap-

pears and her body is discovered through Annie's visions, a Southern Gothic web of lust, propriety, and murder ensues.

With *The Gift*, as with *A Simple Plan*, director Sam Raimi builds a portrait of creeping human ugliness. He builds up to the paranormal with gradual grace, heightening its contrast with the normal by using the soft photography of a Lifetime TV movie. The Dolby Digital 5.1 soundtrack is subtly spectacular, from crisp highs of local crickets to thunderclaps roiling through the sound field along with other suitably ominous low-frequency effects. While *The Gift* ultimately collapses into horror clichés, it's nonetheless a masterpiece of mood and ensemble performance (the cast including Katie Holmes, Greg Kinnear, Giovanni Ribisi, Hilary Swank, and Keanu Reeves). **English, Dolby Digital 5.1 and Dolby Surround; French, Dolby Surround; letterboxed (1.85:1) and anamorphic wide-screen; dual layer.**

Frank Lovece



Psychic sidekick: Cate Blanchett shares a moment with Giovanni Ribisi in *The Gift*

his fellow spaghetti westerns. Basking in the Technicolor splendor of Ernest Laszlo's cinematography, the film's bizarre locations look superb, as do the director's trademark weird geometric compositions. Nevertheless, rumors persist that, without Aldrich's knowledge, star/producer Burt Lancaster had the SuperScope movie printed anamorphically after the shoot. The image, which could be unsqueezed in projection to play in a number of aspect ratios, looks too claustrophobic for the current 2:1 DVD transfer. An alternate 1.85:1 version or even a comparison supplement in a variety of dimensions would have been useful.

Vera Cruz was a major influence on John Sturges's *The Magnificent Seven* (MGM; Movie ★★★★, DVD ★★★), his 1960 Americanized version of Akira Kurosawa's *Seven Samurai*, itself an homage to John Ford. The trail of influence is revealed in the fascinating documentary on this DVD — the transfer is fabulous despite being occasionally faded. The soundtrack, presented as both original mono and in a neat Dolby Digital 5.1 remix, will have you humming the strains of Elmer Bernstein's mythic score long after the last gunshot has been fired. A lively commentary by co-stars Eli Wallach and James Coburn offers additional insight.

Arguably John Ford's final masterpiece, 1962's *The Man Who Shot Liberty Valance* (Paramount; Movie ★★★★, DVD ★★★★), while demonstrating an unabashed love for the genre, is sentimental yet viciously sarcastic and violent. This classic is available for the first time in wide-screen, and the crystal-clear transfer returns the William Clothier black-and-white photography from looking like an elaborate TV movie back to the big-screen-event status it deserves. An effective Dolby Digital 5.1 track has been newly remixed for this release, but purists will probably opt for the original mono, which sounds just fine.

Even middle-of-the-road Ford bests most of the competition, as proved by *The Horse Soldiers* (MGM; Movie ★★★, DVD ★★★), his 1959 true-life Civil War depiction of the push to cripple the Confederate railways. The occasional moving Ford vignette vindicates

the script's shortcomings, and the teaming of John Wayne and William Holden is terrific. Clothier's DeLuxe-colored visuals, a splendid blend of Matthew Brady-like pictorials and some classic Fordian tableaus, are often striking, although the optical effects show some grain with some fading.

Howard Hawks's 1959 *Rio Bravo* (Warner; Movie ★★★★★, DVD ★★★), while peripherally treading familiar ground, virtually reinvented the traditional Western by way of its seamless mix of action, romance, humor, and song. Hawks's multileveled take on relationships and professionalism, as personified by John Wayne, Dean Martin, Angie Dickinson, and Walter Brennan, is a cinematic triumph of camera and camaraderie. This wonderful transfer from a new master, finally in the correct aspect ratio, makes the proceedings seem far less cramped, allowing the viewer to finally enjoy the vivid textures of Russell Harlan's Technicolored canvas.

William Wyler's 1958 epic, *The Big Country* (MGM; Movie ★★★★, DVD ★★★), is bravura Eisenhower-era entertainment that truly lives up to its name. The film lags a little in its last third, but it's infused with fine characterizations from an all-star cast and contains Jerome Moross's legendary music. Franz Planer's brilliant Technicolor images — shot in Technirama, the best anamorphic wide-screen process ever — look great in this sharp-as-a-tack DVD transfer. *Vera Cruz*: English, French, and Spanish, Dolby Digital 2-channel mono; letterboxed (2:1) and anamorphic wide-screen; single layer. *The Magnificent Seven*: English, Dolby Digital 5.1 and 2-channel mono; French and Spanish, Dolby Digital 2-channel mono; letterboxed (2.35:1) and anamorphic wide-screen; dual layer. *Liberty Valance*: English, Dolby Digital 5.1 and 2-channel mono; letterboxed (1.85:1) and anamorphic wide-screen; dual layer. *Horse Soldiers*: English, French, and Spanish, Dolby Digital 2-channel mono; letterboxed (1.66:1); dual layer. *Rio Bravo*: English, Dolby Digital mono; letterboxed (1.85:1) and anamorphic wide-screen; dual layer. *The Big Country*: English and French, Dolby Digital 2-channel mono; letterboxed (2.35:1) and anamorphic wide-screen; dual layer.

Mel Neuhaus

WESTERN ROUNDUP

Vera Cruz (MGM; Movie ★★★★, DVD ★★★), director Robert Aldrich's 1954 landmark about mercenaries in Mexico, plays like a run-through for Sergio Leone and



Coming Releases

APOCALYPSE NOW REDUX

It has 49 additional minutes but no other extras. Paramount, Nov.

DR. SEUSS' HOW THE GRINCH STOLE CHRISTMAS; PEARL HARBOR

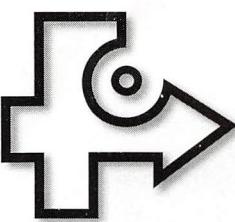
What do these two heap-a-moola-making releases have in common? Well, apart from the requisite Faith Hill music video, each comes in three different extras-stuffed



versions. *The Grinch* comes in wide-screen, pan-and-scan, and pop-up Play Set editions. *Pearl Harbor* comes in a two-disc set, a deluxe Gift Set, and a three-disc R-rated version with even more supplements — although a pop-up interactive infamy game is probably not among them.

Dr. Seuss: Universal, Nov.

Pearl Harbor: Touchstone, Dec.



music

entertainment



BOB DYLAN *Love and Theft*

Columbia

Music ★★★

Recording ★★★★

Everyone who assumed that *Time Out of Mind* would be Bob Dylan's final album, hands up! That unexpected classic would have been a suitably unsettling place for Dylan to wrap his career. Its finale, "Highlands," even had the old outlaw riding off into the sunset. So *Love and Theft* comes as a surprise — both because he had the time between tours to make it at all and because its mood is nearly the opposite of its predecessor.

Indeed, *Love and Theft* is exactly what *Time Out of Mind* wasn't: it's fun, with a juiced-up bar-band feel to the music and an often lighthearted slant to the lyrics. That's not enough to make this a major Dylan album, merely the most accessible thing he's done in decades. Unlike most other good Dylan albums, this one can be pretty well absorbed in the first few listens. And unlike *Time Out of Mind*, whose material was too idiosyncratic to be adapted by anyone else

(Billy Joel, Garth Brooks, and Joan Osborne each screwed up trying), it sounds like a gold mine of potential cover tunes.

Musically, it's not really that much different from the previous record: both are essentially blues albums, apparently recorded live in the studio, with no attempts to soften the cragginess of Dylan's current voice. Once again, the lyrics are fueled by lost love more often than not. The main thing missing here is the austere production of Daniel Lanois, which was as intrinsic to *Time Out of Mind* as the words and the chords. The brighter sound of *Love and Theft* gives the songs an entirely different feel. When Dylan cracks a joke, which happens surprisingly often, there are no sobering overtones. And when he plays the crooner, notably on "Moonlight," he sounds like he's out to grab a piece of Jimmy Buffett's action.

The first two songs can be skipped altogether. Track 1, "Tweedle Dee & Tweedle Dum," finds Dylan twisting the nursery-rhyme format — something he already tried in "Under the Red Sky," and it didn't work there, either. Track 2, "Mississippi," is far better, with rare latter-day evidence of his ability to craft a pretty tune — only problem is that it's a *Time Out of Mind* leftover al-

ready recorded by Sheryl Crow. Once things get properly under way, *Love and Theft* is very much a Texas album, alternating country-swing numbers with scorching two-guitar blues. And it's been a long while since Dylan has put so much clever wordplay and witty one-liners on the same record.

The party-album veneer disappears for the finale, "Sugar Baby," the one song here that sounds like a new Dylan classic, with a haunting tune, an empathetic vocal, and layers of meaning: Is the singer an ex-lover or a ghost? And what of that reference to "bootleggers making pretty good stuff," considering Dylan's own recording history? Before he gets to the religious imagery at song's end, he drops a lyric — "Love is pleasing, love is teasing, love's not an evil thing" — that answers most of the last album's questions in one fell swoop. It feels like another summing-up statement, and Bob Dylan will probably be making a few more before he's through with us.

Brett Milano

STEREOLAB Sound-Dust

Elektra

Music ★★★ Recording ★★★★

Yes, it's the same Stereolab album one more time. That's not necessarily a bad thing, since the band has been brilliant often enough. Its peak, 1997's *Dots and Loops*, was a wonderfully subversive take on 1960s bachelor-pad music — bright and sparkly on the surface but filled with dissonance and interplay. Stereolab has been minding that vein ever since, and *Sound-Dust* is where the rut finally sets in.

The soundscape here, as inviting as ever, gradually changes shape from fully electronic to live band and back again. Laetitia Sadier and Mary Hansen provide the usual breathy vocals and seductive whispers, but the songs have more surface catchiness and fewer hidden corners. One likely problem is that Stereolab's favored collaborators — experimental guitarist Jim O'Rourke, Tortoise leader John McEntire, and head High Llama

STAR SYSTEM

Stellar	★★★★★
Excellent	★★★★
Good	★★★
Fair	★★
Poor	★

Music refers to content alone.

Recording refers to sound quality and, where applicable, multichannel mix.

Tracked Actors

Sean O'Hagan — sound more prominent than the band itself. And the various recycled Brian Wilson-isms are starting to grate. Kill those vibes, already.

At its best, Stereolab takes bits of music you swear you've heard before and combines them into something new. This time, it seems like the band has combined bits of its own back catalog.

Brett Milano

MOKE Carnival

Ultimatum/Artemis

Music ★★★★ Recording ★★★★

The British pop/rock quartet Moke distinguishes itself on its sophomore album the same way it did on its self-titled debut — by mixing a talent for appealing songs with careful attention to production detail. Moke also knows how to blend all its influences in a nonjarring manner, as in "Hanging Around," where the white-boy rap of the verse flows into a generously melodic chorus, the whole effect heightened by overdubbed vocals and guitar.

Lead singer John Hogg, who sounds like Perry Farrell when he's going for emphasis, supplies the aggressively disenchanted lyrics. He writes the music with the rest of the band: guitarist Sean Genockey, bassist Alex Evans, and drummer John Morgan. Together, they can muster up a hard-edged attack, coming on strong in the anthemic opener, "My Degeneration." But the songs that have a certain kind of musical sweetness — like "Slide" and "I Don't Mind" — best display Moke's growing identity.

It's not easy striking a proper balance between melody and crunch, but these guys have the knack.

Richard C. Walls

SLIPKNOT Iowa

Roadrunner

Music ★★★ Recording ★★★

SYSTEM OF A DOWN Toxicity

American/Columbia

Music ★★★★ Recording ★★★★

Like a hard-rock Paul Revere, I feel it my solemn duty to warn you upfront: The aggro metal is coming! The aggro metal is coming! Two of the heaviest bands to splatter across the landscape, Slipknot and System of a Down, have joined forces on a fall tour after releasing their respective sophomore albums. Now, I went to college in Des Moines, Slipknot's home base, so I understand where the band's pent-up anger originates. But, to borrow from Osmosis Jones, "Why you have to hit so hard?" There's virtually no letting up during the 66 punishing minutes of *Iowa*,



Clint Eastwood, by horse;
"Clint Eastwood," by buggy

Used to be, an actor's name was part of a song title ("Robert De Niro's Waiting"). Today, an actor's name can be a song title all by itself. Witness "Clint Eastwood" by Gorillaz, a cartoon band ("Archies on acid") concocted by, among others, Blur's Damon Albarn. In "Clint Eastwood," however, Clint Eastwood isn't even mentioned.

More explicit are Self's "Meg Ryan" ("If Meg Ryan were my personal taste / I'd be atop the Empire State every Christmas") and Bree Sharp's "David Duchovny" ("David Duchovny, hovering above me / American Heathcliff, brooding and comely"). And what was it about Lee Remick that has inspired no fewer than three artists — Michael Smith, the Go-Betweens, and Hefner — to write three different songs called "Lee Remick"?

Stephen Coates has gone further: he uses an actress's name as his own name. At first, he was the artist known as Tuesday Weld. On his brand-new Kindercore CD of "swing-onica," *Where Psyche Meets Cupid*, he's now known as (The Real) Tuesday Weld — presumably to distinguish himself from the real Tuesday Weld. Cut!

Ken "Sir Ralph" Richardson

from the relentlessly thudding kick drums on "People = Shit" to the doom-und-gloom of "Everything Ends" — though the buildup of the intro to "Gently" and the proggy break in "The Shape" show some welcome depth. If low-end hari-kari is your thing, then *Iowa*'s the state of mind for you.

L.A.'s System of a Down throws quite a few more changeups into the 44-minute, mind-melting *Toxicity*. Highlights include the time-signature shifts of "Prison Song," the Rush-like riffery in the midst of "Deer Dance," the jazzy break in "Shimmy," and the acoustically strummed "Pinball Wizard"-on-downers intro to "Chop Suey!" Of course, if you crave gobs of guttural bellowing, there's plenty of that to be had here as well. I can only imagine what the quicksilver-tongued rappers of OutKast could do with the twisted rat-a-tat taunts that pepper "Psycho."

Mike Mettler

DANIEL DALE JOHNSTON

Rejected Unknown

Gammon

Music ★★★★ Recording ★★★

Daniel Johnston, the often-institutionalized Texan who puts the "altered" in alternative, is back with *Rejected Unknown*, his first album since 1994's *Fun*. One of those pure, naive talents who is touched by both divine light and harrowing darkness, he juggles a rare gift for melody with the curse of mental illness.

Johnston sings yearningly of lost love, carrying a torch for one Laurie and even illustrating the tortured scenario on the CD's inner sleeve. ("Laurie loves me dearly," chants a froglike alien as he marches toward a purple-bikini-clad woman in tears.) If all this seems a bit much, well, it is — especially on dirges for shaky voice and piano like "Funeral Girl," where he sings, "I knew a girl at the funeral / She said she was dead." But then this creepy-crawly tune resolves into a jaunty, horn-stoked romp that's all the stranger for its sudden accessibility.

Johnston shines brightest in "Impossible Love," which has a sweet, poppy swing to it, and "Party," a sad-comic evocation of the universal loony bin: "Hey, what does it mean to live in this world / When we're all so very crazy, and maybe there's plenty of time to party, party, party." Just as Brian Wilson aficionados trade nuggets of the unreleased *Smile* in search of cracked genius, *Rejected Unknown* will attract its mesmerized partisans. It's all a demented gas — but I have to say I'm partial to "Billions/Rock," a histrionic paean where Johnston unwittingly satirizes

the notion of rock stardom better than a dozen bookish critics.

Parke Puterbaugh

JOHN HIATT

The Tiki Bar Is Open

Vanguard

Music ★★★★ Recording ★★★★

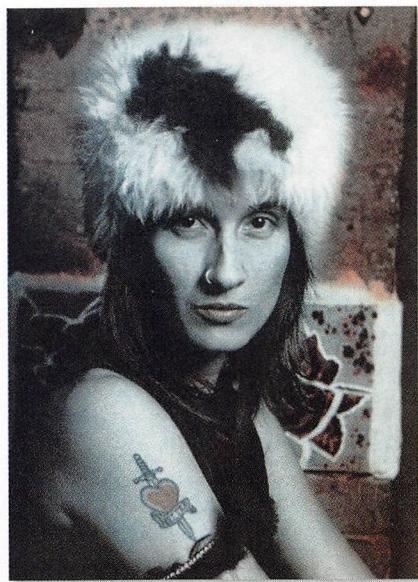
Anthology

Hip-O

Music ★★★★ Recording ★★★★

Some of John Hiatt's fans have never seemed too comfortable with the fact that he's got a sense of humor. It's hard to miss in concert, where Hiatt's an outright ham. But there's usually a backlash when he shows some wit on record, or when he just kicks back and rocks. Witness the relative failure of perfectly good albums like *Perfectly Good Guitar*, *Little Head*, or the shamefully underrated band project *Little Village*. No wonder last year's admittedly fine *Crossing Muddy Waters* — his most "serious" disc in years — was hailed as the big comeback.

Accordingly, the more earnest Hiatt-ites out there may be disappointed to learn that *The Tiki Bar Is Open* is loose and eccentric (the techno-swamp title track is loopy in more ways than one), and Hiatt hasn't played this loud since he stopped drinking. This isn't just a rock album, it's a Cajun-metal-blues-punk-rock album, with furious work by the Goners (sounding far less tasteful than they did on 1988's *Slow Turning*) and some of Hiatt's catchiest, raunchiest songs ever. The second half bogs down with two characteristic love ballads — they're fine, but they're on the wrong album — and a Pink Floydian finale that's too much



Andrea Echeverri of Aterciopelados

of a stretch, even for Hiatt. But the first half includes a small masterpiece in "All the Lilies in Ohio," with a stellar chorus hook and a lost-love story that opens with the main character throwing up.

The two-disc *Anthology* finally gives Hiatt's career a thorough summary, consolidating his three previous compilations (sets on Geffen and A&M that covered specific eras plus a botched *Best Of* on Capitol) and representing every studio disc through *Crossing Muddy Waters*. I could quibble that the underrated albums are still underrated (only one *Little Village* track appears, and it's not even one of the best), and there's one glaring omission in "Living a Little, Laughing a Little," his duet with Elvis Costello. But Hiatt's best-known songs gain context in this setting. Indeed, the sobered-up bliss of "Thank You Girl" and "Have a Little Faith in Me" cuts deeper next to drunk-and-lonely rants like "The Usual" and "She Said the Same Things to Me," recorded a mere two years earlier. *Brett Milano*

ATERCIOPELADOS

Gozo Poderoso

BMG U.S. Latin

Music ★★★★ Recording ★★★★

JAGUARES

Cuando La Sangre Galopa

BMG U.S. Latin

Music ★★★ Recording ★★★

PUYA Union

MCA

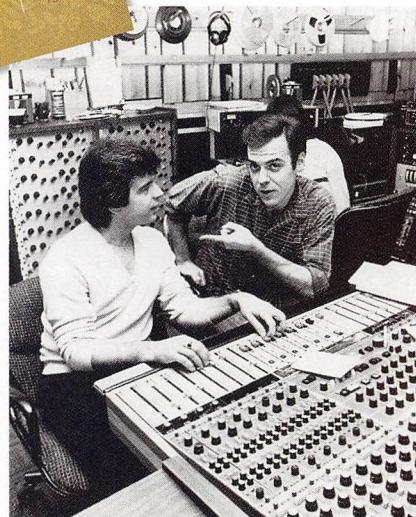
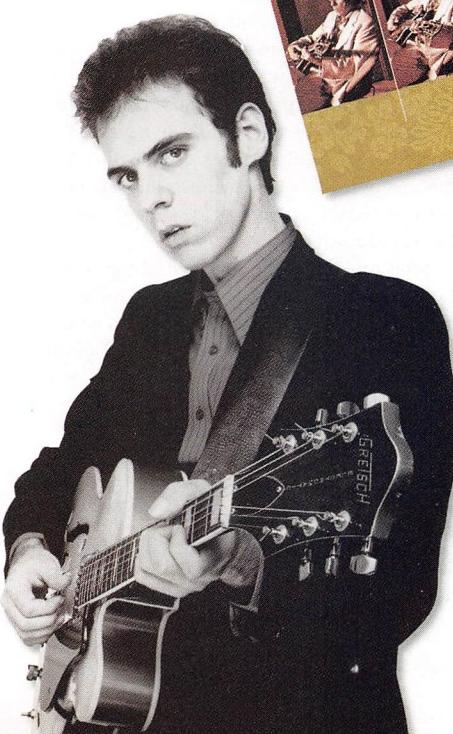
Music ★★★ Recording ★★★

As Jon Pareles has pointed out in *The New York Times*, "In the United States, any Latin rock that's not Ricky Martin qualifies as alternative." In fact, *rock en español* is so wide-ranging that it can encompass the folk/electronica/pop of Colombia's Aterciopelados, the arena rock of Mexico's Jaguares, and the rap-metal of Puerto Rico's Puya.

Aterciopelados ("Ah-tair-see-oh-peh-lah-dose," meaning the *Velvety Ones*) have been getting the biggest hype lately, and it's absolutely justified. The Bogotá duo of bassist/arranger/producer Héctor Buitrago and singer/guitarist Andrea Echeverri, backed by a four-man band, are utterly tantalizing on their fifth album, *Gozo Poderoso* (*Powerful Joy*). The lyrics are in Spanish, as they should be, but you won't need a dictionary to enjoy the rock-bolero of "Rompecabezas" or the catchy cumbia of the single "El Álbum."

Also singing in Spanish is the supposed Jim Morrison of Mexico City, Saúl Hernández, who with drummer Alfonso André and new guitarist César López leads the "musical workshop" that is Jaguares. Unfortunately, on the band's third album, *Cuando La Sangre Galopa* (*When the Blood Gallops*), Hernández's Morrison isn't very compelling, and the workshop is too far North of the Border, with genuine Latin moments coming only in the salsa of "Como Tú" and the folkish end of "La Vida No Es Igual." And beware the hidden bonus, a bogus boogie.

On their second album, *Union*, the dudes of Puya, transplanted from San Juan to L.A., have gone Anglo in a big way: "This is the Puya, comin' straight to ya," and so forth and so on, mostly in the slamming metal that has found them comfortable at Ozzfest. It's refreshing, then, when they make like vintage Santana in "Si Aja" and chant against the American military's bombing school on the islet of Vieques in "Pa' Ti Pa' Mi." And nothing says "Puerto Rico" more than the sweet sound of the *coquí*, the little frog who does a cameo at the start of "Ahorake." The hidden bonus here is a long Latin jam that makes me want to believe Puya when they sing else-



Hiatt in the mid-1970s (far left) and, with producer Tony Visconti, recording *All of a Sudden* in 1982

Where Does Technology Become Entertainment?

Ready for the crystal clarity of high definition TV? Want to download music from your computer? Looking for the hottest DVD and CD releases?



SOUND & VISION
will show you how
to make it happen
the right way — the
first time!

Whether you're
setting up your first
home theater, or
eyeing a new DTV ...

Whether you're on a
budget, or have
money to burn ...

SOUND & VISION delivers all the information you need to stay on top of today's fast-moving technology. What's more, we make it easy for you to get the most from every dollar you spend on the latest audio, video, home theater, and multimedia systems. Systems that will literally blow you away.

In every issue, you'll find all the stats you need to make meaningful product comparisons. Plus, reader-friendly test reports. Sound advice. Colorful commentary. Strong opinions. Hands-on evaluations. Savvy shopping tips. Comprehensive music and movie reviews.

Whatever your pleasure, **SOUND & VISION** provides more options. More information. And more reviews so you can uncover the gems that will bring the best home entertainment experience into your living room, at a price you can afford.

With this special introductory offer, you can get the next 10 issues for just \$12.00. That's 70% off the annual newsstand cost. It's like getting 7 issues FREE!

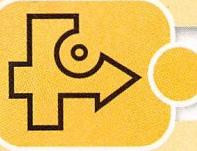
10 issues
for only
\$12

SOUND & VISION

HOME THEATER • AUDIO • VIDEO • MULTIMEDIA • MOVIES • MUSIC

**Where Technology Becomes Entertainment™ — and where
you'll find the information you
need to make buying the
right stuff a sure thing!**

To subscribe call 1-800-688-8887 and mention code 42F4 or visit our website at www.soundandvisionmag.com



Tracking Surround

Lately, DVD-Audio releases have been turning up in some strange places. And instead of Warner Music Group reissues of old records, they're current albums from other labels.

For example, you'll find a bonus DVD-A in the cloth-bound enhanced-CD edition of **Boz Scaggs**' solid return, *Dig* (Virgin; Music ★★★★, Recording ★★★★). The surround mix, apparently by Elliot Scheiner, spreads vocals across the three front channels for a nicely personal, in-the-room effect. And I love how the guitars encircle me in "King of El Paso." I don't love how the mix can be head-turning, prompting me to look to the rear for horns ("Miss Riddle"), percussion ("I Just Go"), and background vocals ("Desire"). There are no extras on the DVD-A, but the enhanced CD offers a 10-minute interview.

A bonus DVD-A is packaged in the first pressing of the **Randy Travis** DVD-Video *Live: It Was Just a Matter of Time* (Image; Music ★★★★, Recording ★★★★★). Just a country concert? Actually, it's a multichannel marvel, as mixer Bill Schnee gives the performance a rich live sound by placing just the right amount of ambience in the two surround channels. It helps make this career-spanning set a must-buy, as does the DVD-Video's biggest extra, a revealing 30-minute interview.

Folk-pop singer-songwriter **Jonathan Brooke** has released a two-sided Special Edition of her career-high *Steady Pull* (Bad Dog; Music ★★★★, Recording ★★★★) in a DVD-Video case. One side is indeed a DVD-Video, with a different clip for each of the 12 songs and a documentary. But the other side is a vivid DVD-Audio that allows you to select between 88.2-kHz/24-bit surround sound and 176.4-kHz/24-bit stereo.

Meanwhile, the Warner Group hasn't been standing still. Two of its newest DVD-Audio entries tap current albums, too, and they represent opposite extremes in multichannel mixing. Hip-hop queen **Missy Misdemeanor Elliott**'s *Miss E... So Addictive* (The Gold Mind/Elektra; Music ★★★★, Recording ★★★★) is wonderfully raucous, as original co-mixer Jimmy Douglass heightens Timbaland's already imaginative production without overdoing anything (including, thankfully, the subwoofer). But **Paul Simon**'s *You're the One* (Warner Bros.; Music ★★★★, Recording ★★★★) is a missed opportunity on DVD-A. Despite the multitude of instrumental parts, original engineer/mixer Andy Smith puts only the slightest of accents and ambience in the surround channels and a muffled ghost of Simon's voice in the center.

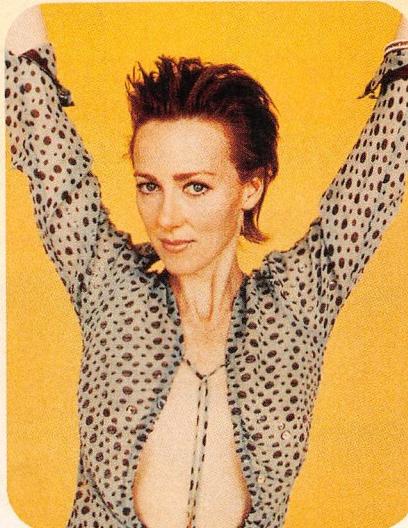
The Super Audio CD camp hasn't been standing still, either, with much of its recent action coming from boutique labels. A couple of Chesky SACDs were originally recorded in the same location — St. Peter's Episcopal

Also on SACD are three releases recorded live to six channels by Tom Jung for his label, dmp. The sixth channel, by the way, "is not designed to drive a subwoofer." Instead, it's a full-range channel that "can be used overhead or as a center surround for added dimensionality." If you're not so equipped, just shut off your sub and you'll do fine. As for which of the SACDs to choose, **Joe Beck and Ali Ryerson**'s *Django* (Music ★★, Recording ★★★★) may be guitar-and-flute "chamber jazz" but only if that chamber is a dentist's office, and the **Pilhofer Jazz Quartet**'s *Full Circle* (Music ★★★, Recording ★★★★) has pianist Herb sounding too light and poppy. Go for *So Real* by **Warren Bernhardt with Jay Anderson and Peter Erskine** (Music ★★★★, Recording ★★★★). Bernhardt (anchored in the right front channel) is effortlessly engaging on piano, and he's backed expertly by bassist Anderson (center) and drummer Erskine (left front) in an attractive set of standards and originals.

Returning to DVD-Audio — and faced with four new titles from our surround-happy friends at DTS — I figured I'd have to batten down the rear hatches. But surprise! **Estéban**'s *Enter the Heart* (Music ★★★, Recording ★★★★) and the self-titled **David Alan** (Music ★★★★, Recording ★★★★) are sensible multichannel discs. On the former (which includes two long video clips as bonuses), the flamenco guitarist leads a band through pieces like "Sedona Sunrise" and "San Antonio Sunset." On the latter disc (a reissue), the country-pop singer-songwriter rips it up on guitar from the start, and the shoulda-been-hits keep on comin'.

The third DVD-A from DTS, Mr. Big guitarist **Paul Gilbert**'s *Alligator Farm* (Music ★★, Recording ★★), coulda been left on the shelf. The hard rock is over-the-top . . . and the surround mix isn't over-the-top enough! Betcha thought I'd never say that about a DTS disc. Anyway, the label comes back firing on all channels on the **Gluey Brothers**' *Stiff for the Elders* (Music ★★, Recording ★★★★), which claims to "raise the bar for surround-sound creativity with this ultra-aggressive 5.1 mix" by Brant Biles. It's certainly demo-disc quality, but it's in the service of silly joke rock. Great documentary and video-clip extras, though.

Also great is a talk with **Alice Cooper** and producer/remixer Bob Ezrin on the DVD-A of *Welcome to My Nightmare* (Atlantic/Rhino; Music ★★★★, Recording ★★★★). Now, here's some serious joke rock. It may not be as consistent as *Billion Dollar Babies*, but when the climax comes, you'll feel like a multi(channel)millionaire. Ken Richardson



You go multi, girls! Brooke (top), Elliott

Church in New York — but you wouldn't know it from the results. Jazz-pop singer **Christy Baron**'s *Steppin'* (Music ★★, Recording ★★) is an echoey mess, with vocals and instruments drifting in a big ghastly haze of ambience. Photos show Baron in a bar, but it sounds like she's lost in Notre Dame. (It doesn't help that she's a weak stylist saddled with fussy arrangements.) By comparison, the self-titled **David Johansen and the Harry Smiths** (Music ★★★★, Recording ★★★★) has the singer coming across loud (of course) and clear. The ambience is still a tad big, and a more inventive surround mix could have put us in the middle of another Buena Vista Social Club, but this is a sharp-sounding acoustic/electric folk-blues homage.

where, "The memory of my island is what lights my path." *Ken Richardson*

MAXWELL Now

Columbia

Music ★★★★ Recording ★★★★

THE ISLEY BROTHERS

Eternal

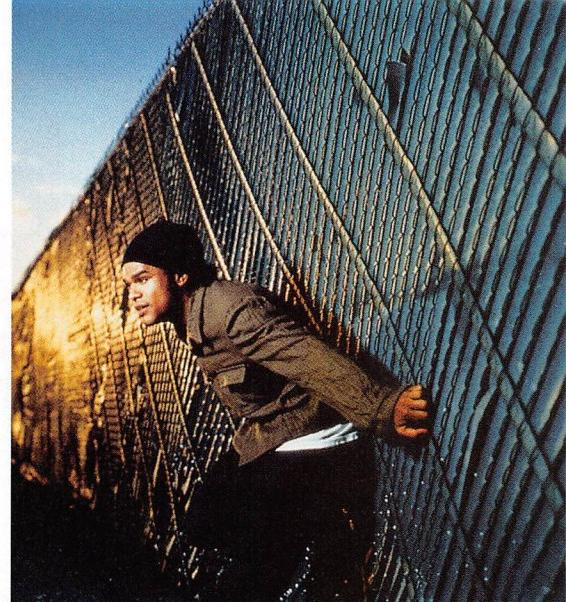
DreamWorks

Music ★★ Recording ★★★★

Using the sorcery of smooth, artful R&B as his instrument of seduction, Maxwell establishes himself on *Now* as a love man approaching the level of Marvin Gaye or Prince. He's in control of his materials and persona from the opening number, "Get to Know Ya," which contrasts atmospheric guitars and burnished soul horns with waddling bass notes and oddly punctuated beats. The set oozes sensibility and sensuality in a tapestry of sound that's more about a textured whole than individual instruments. Maxwell's voice, ranging from a conversational croon to a rounded falsetto, comes across something like a soprano sax. This urbane suite of songs — particularly the melancholy "W/As My Girl," the ruminative "Changed," and the nasty-minded "Temporary Nite," with its slashing guitar funk — hangs together as well as any other R&B record released this year.

The Isley Brothers, who laid a lot of the groundwork in this realm, are getting their commercial due (again) with *Eternal*. While it's great to see these legends connecting with young listeners, this is not their finest hour. A raft of producers and participants swamp the outnumbered Isleys — now down to vocalist Ronald and guitarist Ernie — in an endless procession of wearisome slow grooves built around Ronald's alter ego, Mr. Biggs, who charms the ladies with diamonds, big cars,

and wads of cash. The album drones on for an hour and a quarter, making you feel like an unwitting voyeur crouched behind the sofa as Mr. Biggs lures some conquest with his satiny spiel ("Your hips, your thighs, your lips, your eyes . . ."). Meanwhile, longtime fans of the Isley Brothers wait in vain for signs of their former fire. *Parke Puterbaugh*



Maxwell, a perfect foil for R&B fencing

JAZZ

DAVID MURRAY POWER QUARTET

Like a Kiss That Never Ends

Justin Time

Music ★★★★ Recording ★★★★

WORLD SAXOPHONE

QUARTET 25th Anniversary:

The New Chapter

Justin Time

Music ★★★★ Recording ★★★★

BLUIETT / JACKSON /

EL' ZABAR The Calling

Justin Time

Music ★★★ Recording ★★★★

How does an avant-gardist sustain his edgy creativity long after all the barriers have been smashed? Well, of the players here, tenor saxophonist David Murray has the most effective formula. On *Like a Kiss That Never Ends*, he fronts a trio that plays its blues and bop fairly straight-ahead. Murray starts his solos on his best behavior, but he builds to a probing elasticity, finally reaching full-tantrum mode. The contrast between the levelheaded rhythm section — pianist John Hicks, bassist Ray Drummond, and drummer Andrew Cyrille — and the loose-cannon leader heightens the melodramatic tango of the title track and the exhilaration of the funky "Blues for Felix."

Another way to keep the freedom sound fresh is to put it in the cushiony sonorities of the World Saxophone Quartet. Twenty-five years and nearly as many albums breed a certain familiarity, but the group — now consisting of original members Murray, Oliver Lake, and Hamiet Bluiett plus relative newcomer John Purcell — has perfected the art of the varied program. *The New Chapter* ranges from Bluiett's excessively disjointed "Bits n' Pieces" to the more coherent and majestic eeriness of Purcell's title track, the WSQ's first experiment with overdubbing.

The Calling, baritone saxophonist Bluiett's collaboration with keyboardist D.D. Jackson and percussionist Kahil El' Zabar, finds him doing a heavier, more swaggering version of the freebop favored by Murray while the trio demonstrates a credible postmodern range. Jackson, in particular, sounds like he could do anything, cranking up some barroom or-

gan for "Blues Grind" and traipsing atonally behind Bluiett on "Blues for the People." With El' Zabar contributing some Afrocentric grooves, it's another case of a well-paced program allowing the more outré elements to go down smoothly. *Richard C. Walls*

CLASSICAL

SCHOENBERG

Transfigured Night

VERESS

Four Transylvanian Dances

BARTOK Divertimento

Camerata Bern; Thomas Zehetmair, violin and cond.

ECM New Series

Performance ★★★★

Recording ★★★★★

According to the liner notes, the unifying theme here is "exile," a reference to the three featured composers. But it could also be how the melodic sadness of Romanticism survived into the 20th century.

The set opens with Thomas Zehetmair leading the Camerata Bern through a reading of Schoenberg's once foreboding *Transfigured Night*, which begins with edgy intensity before becoming voluptuously dour. What must have seemed barely coherent back in 1899 now sounds like a slightly sinister lullaby. This is followed by Sandor Veress's *Four Transylvanian Dances*, a mid-century mix of ethnicity and modernism that moves from somber lyricism (the third dance in particular coming across like a cousin of Schoenberg's *Night*) to fiery exuberance. Last, there's Bartók's *Divertimento* (1939), with Zehetmair pushing the orchestra to the point of rapturous urgency.

Given the gloss of morose reflection that hangs over these compositions, they can be remarkably energetic. And it's the extroverted passages that give this session its interpretive identity — aided, of course, by ECM's always generous sound. *Richard C. Walls*

TIP Sheet

Coming Releases

LENNY KRAVITZ Lenny

Stands to make a pretty penny. Virgin, Oct.

SHELBY LYNN Love, Shelby

Produced by . . . Glen Ballard? Island, Nov.

KASEY CHAMBERS

Barricades & Brickwalls

Acclaimed Aussie. Warner Bros., Nov.

BRITNEY SPEARS

Still untitled at press time, and maybe you could care less, but how could we resist Lenny, Shelby, Kasey & Britney? Jive, Nov.

UPDATES!

Powerman 5000's *Anyone for Doomsday?* was delayed for reworking. Louise Goffin's *Sometimes a Circle* is bumped to January, and Björk has not put that dress in the closet.

ANTHONY MANDER/COLUMBIA

Receivers

Technics



Technics® SA-EX140

Stereo Receiver
•100 watts/channel •30 AM/FM
presets •4-audio/1-VCR audio
signal inputs •A/B speaker
selector •A/V remote

\$129.99 (TEC SAEX140)

TEAC AG-360

•50 watts/ch., 16-FM/8-AM presets,
4 audio inputs **\$79.99**

TEAC AG-780

•100 watts/ch., 30 AM/FM presets,
sleep timer, remote **\$99.99**

Sony STR-DE135

•100 watts/ch., 30 AM/FM presets, sleep timer,
A/V remote with glow keys **\$149.99**

Technics® SA-DX750

•Home Theater, 100w x 5, Dolby Digital, A/V remote,

\$20 Mail-In Rebate **\$169.99**

JVC RX-6010VKB

•A/V, 100w x 5, Dolby Digital/DTS decoders,

30-FM/15-AM presets, A/V remote **\$179.99**

CD Players/Changers

TEAC



TEAC CD-P1120

CD Player

•Single disc player with 16-track
programming •3-way repeat
•Headphone jack with volume
control •Music calendar •Remote

\$79.99 (TEA CDP1120)

Sony CDP-CE275

•5-CD Changer, CD-R/CD-RW playback, 32-track
programming, jog dial **\$99.99**

Technics® SL-PG4

•Single CD Player with CD-R/CD-RW playback,
optical digital output, remote **\$119.99**

Sony CDP-CE400

•400-disc, Advanced MegaStorage control for 2nd CD

changer, PC keyboard input, remote **CALL**

TEAC AD-600

•3-tray CD Changer/Cassette, 20-track programming,

auto-rev/rec/play, Dolby B **\$249.99**

Sony SCD-CE775

•Super Audio 5-Disc CD Changer, SACD multi-channel +

CD/CDR/CD-RW playback, remote **CALL**

Bookshelf Speakers

Mission



Mission 771

Bookshelf Speakers

•2-way, with tuned reflex port
•5.25" Aerogel woofer •1" dome
tweeter •7.5 Hz - 20 kHz •25+100
watts •8Ω •Rosewood veneer

\$149.99/pr. (MSS 771-RO)

JBL Control 1X

•Personal Monitor, 2-way, 4" woofer, titanium-laminate

tweeter, 80 watts max, shielded pr. **\$79.99**

JBL N24

•2-way, ported, 4" PolyPlus™ woofer, titanium-laminate

tweeter, shielded, 100 watts max pr. **CALL**

Yamaha NS-6390

•3-way, 8" woofer, 4" midrange, 0.75" dome tweeter,

70 watts RMS, shielded pr. **\$99.99**

Bose® 201® Series IV

•Direct/Reflecting®, 6.5" woofer, 10-120 watts

black or rosewood vinyl pr. **\$198.00**

Advent AV570

•Powered Partners, 2-way, 35 watts per speaker,

5" woofer & 1" tweeter, shielded pr. **\$249.99**

J&R MUSIC WORLD®



WALK IN
Park Row
NYC



PHONE IN
800-221-8180
ANYTIME



LOG IN
www.jandr.com
AOL Keyword: J&R

Pop Music- Call To Order More Titles From Our Huge Inventory

Laurie Anderson: *Life On A String* CD \$13.99
NON 79539

Cowboy Junkies: *Best Of* CD \$12.99
RCA 1068052

Maxwell: *Now* CD \$13.99
COL 67136

Graham Parker: *Deepcut To Nowhere* CD \$12.99
RAI 60082872

America: *Complete Greatest Hits* CD \$12.99
RHI 20074375

Simon & Garfunkel
Columbia Studio Recordings

\$35.99
5-CDs

COL 63815
COLUMBIA

Marvin Gaye: *Very Best Of* CD \$17.99
MOT 014367

k.d. Lang: *Live By Request* CD \$13.99
WB 48108

Prince: *Very Best Of* CD \$13.99
RHI 74272

Various Artists: *Source Hip Hop Awards 2001* CD \$13.99
DEF 586239

Gigi D'agostino: *L'Amour Toujours* CD \$12.99
ARI 14710

A/V Receivers

Technics

Was \$249.99



Technics® SA-DX950

Dolby Digital/DTS Home Theater Receiver
•100w x 5 •DVD-audio ready
•Dolby Digital/DTS decoder •30-
AM/FM presets •Remote
\$199.99 - \$50 Mail-In Rebate
\$149.99 After Rebate
(TEC SADX950)

Technics® SA-DX1050

•Dolby Digital/DTS Home Theater, 100w x 5, DVD-audio
ready, 5.1ch, 5.1ch, Dolby Digital/DTS decoders,
8 DAP modes, universal A/V remote **\$249.99**

JVC RX-8010VBK

•100w x 5, high current, Dolby Digital/DTS decoders,
8 DAP modes, universal A/V remote **\$299.99**

Onkyo TX-D5595

•5w x 5, Dolby Digital/DTS decoders, 8 DSP modes,
30-AM/FM presets, remote **CALL**

Sony STR-DE1075

•100w x 6, 6.1/5.1-ch. inputs, Dolby Digital/DTS,
32-bit DSP on-screen display, remote **CALL**

Yamaha HTR-5280

•100w x 5, Dolby Digital/DTS, Dolby Digital Matrix 6.1
& DTS ES compatible, Soundfield processing **CALL**

CD Players/Changers

Was \$119.99



Technics® SL-PD9

5-Disc CD Changer
•Front-loading rotary mechanism
•Quick Disc Rotation System •32-
track programming with delete
play •Remote
\$99.99 (TEC SLPD9)

TEAC PD-D2391

•5-disc, CD/CD-R/CD-RW compatible, 32-track program-
ming, music calendar, remote **\$74.99**

Sony CDC-506

•5-disc, PlayXchange™ change 4 discs while 1 plays,
40-track programming, CD text, remote **CALL**

Sony CDP-CE375

•4-disc, play / exchange 4 capability, 32-track
programming, jog dial, remote **\$129.99**

Sony CDP-CE575

•3-disc, 32-track programming, Custom File modes,
CD Text display, Jog Dial™, remote **\$149.99**

Technics® SL-MC7

•110-disc changer + 1-disc single play, 32-track
programming, Group play, remote **\$149.99**

CD Recorders

Was \$399.99



TDK DA3826

Dual-Tray CD Recorder
•4x disc-to-disc, & track-to-track
recording speed •Sampling rate
converter •Coaxial/optical digital
connections •Remote
\$269.99 (TEA DA3826)

TEAC RW-D250

•Dual-Deck CD-RW Recorder, plays/records
CD-R/CD-RW discs, sync recording **\$259.99**

Philips CDR75

•Dual-Deck CD, 2 separate record & play decks,
double speed & listen mode recording **\$299.99**

Philips CDR950

•Dual Deck CD Recorder, plays CD/CD-R/CD-RW, records
CD-R/CD-RW, 4x high-speed dubbing **\$299.99**

Sony RCD-W1

•Dual Deck CD Recorder, plays CD/CD-R/CD-RW,
records CD-R/CD-RW, 4x high-speed dubbing **CALL**

Philips CDR785

•Single drawer CD/CD-RW recorder + 3 CD changer,
2x speed CD dubbing, remote **\$349.99**

Cassette Decks

SONY



Sony TCW-E475

Dual Auto-Reverse Cassette Deck
•Dual auto-rev. play •Single auto-rev.
record •Dolby B/C/HX-Pro
•Relay play •Full-logic •Pitch
control •High-speed dubbing
\$149.99 (SON TCWE475)

TEAC W-518R

•Dual deck with auto-reverse playback in
first transport, Dolby B, high-speed dubbing **\$69.99**

JVC TD-W354

•Dual auto-rev., full-log, Dolby B/C/HX-Pro,
pitch control, 2-speed dubbing **\$169.99**

TEAC W-860R

•Dual deck auto-rev. record / play, pitch control,
Dolby B/C/HX-Pro, full-log **\$179.99**

Technics® RS-TR575

•Dual auto-rev. record / play, Dolby B/C/HX-Pro
feather-touch controls **\$199.99**

Sony TC-WE835S

•Dual 2-motor transports, dual auto-rev. record / play,
Dolby S/B/C/HX-Pro pitch control **\$249.99**

Portable CD/Radio

Panasonic



Panasonic® SL-SW899V

Portable CD Player/Radio
•SHOCKWAVE® concept •30-
AM/FM presets •40-sec. No-Skip
system •24-track programming
•S-XBS® •Headphones & remote

\$129.99 (PAN SLSW899V)

Coby CX-CD444

•45-sec. anti-skip memory, 20-track programming,
18-AM/FM presets **\$49.99**

Panasonic® SL-SX289V

•40-sec. no-skip, 24-track programming,
30-AM/FM presets **\$69.99**

Aiwa XP-R220

•4.5-sec. 38-sec. memory backup, 30-AM/FM
presets, 24-track programming **\$79.99**

Sony D-FJ61

•Skip-Free G-Protection™, 30-AM/FM
presets, 24-track programming **\$99.99**

Sony D-F518

•Sports series, water resistant, G-Protection™
30-AM/FM presets, sports strap **\$149.99**

Bookshelf Speakers

Thorens



Thorens TD170

3-Speed Belt Drive Turntable
•33/45/78 r.p.m. •DC motor
•Fully automatic operation
•Includes Ortofon cartridge & dust
cover •Black
\$299.99 (THN TD170)

Shure M-92E

•Phone Cartridge, universal mount, birodial

diamond stylus, 0.75-1.5 grams **\$29.99**

TEAC P-A688

•Turntable, compact, belt drive, fully automatic,
33/45 RPM, phone preamp & cartridge **\$79.99**

Sony PS-LX250H

•Turntable, belt drive, fully automatic, 33/45 RPM,
phone preamp & cartridge **\$89.99**

Technics® SL-BD22K

•Turntable, belt drive, semi-automatic, 33/45 RPM,
120-watt 12" subwoofer, shielded **\$154.99**

Shure V15 VxMR

•Phone Cartridge, standard mount, 1-1.25
grams, stabilizer brush **CALL**

Home Theater Speakers

JBL



JBL Simply Cinema™ SCS135

6-Piece Home Cinema Speakers
•100 watt powered subwoofer with 8" driver •Center ch. speaker
•4 satellite speakers with brackets
•Shielded •10-50 watts
\$299.99 (JBL SCS135)

Technics® SB-CSS80

•Center Channel/Surround Speaker System, 3-speaker
shielded center speaker + 2 dipole speakers **\$69.99**

Yamaha NS-P220

•5-shielded speakers, including 50 watt subwoofer + five
2-way satellites with brackets, 30-100 watts **CALL**

JBL PB12

•Powered Subwoofer, 250 watts, 12" driver, adjustable
low-pass crossover & level control, black **CALL**

Acoustic Research HC2

•5 Edge satellites with integrated stand/wall bracket
120-watt 12" subwoofer, shielded **\$429.99**

Bose® Acoustimass® 15

•Home Theater Speakers, Powered Acoustimass® module
+ 5 cube speakers, black or white **\$1299.00**

Shure V15 VxMR

•Phone Cartridge, standard mount, 1-1.25
grams, stabilizer brush **CALL**

Turntables/Cartridges

TERK



TERK AM-FMQ

Powered Indoor AM/FM Stereo Antenna
•Selectable modes: wideband or
narrow to optimize reception •Pin-dot
pre-tuning •LED display

\$79.99 (TRK AMFMQ)

B-Tech

BT1

- Universal Wall-Mount Brackets, for small speakers-
22 lb. max., tilts 18° up/down pr. **\$29.99**

AudioSource® EQ 200

- Graphic Equalizer, 10bands/channel, spectrum
analyzer display, illuminated sliders **\$129.99**

Monster Cable HTS2000

- Home Theatre PowerCenter™ Line Conditioner, 1300
joules, \$100 connected equipment protection **CALL**

Technics® SH-GE70

- Graphic Equalizer, 7bands/channel, 6 factory/
6 user presets, spectrum analyzers **\$159.99**

Niles SVL-4

- Speaker Selector/Volume Controller, holds 4 pairs,
step up to 100 watts/channel **\$249.99**

CALL US TOLL FREE FOR ITEMS NOT LISTED IN THIS AD



SHOP BY PHONE
24 HOURS A DAY
7 DAYS A WEEK
FROM ANYWHERE IN THE USA
J&R Music World, 59-21 Queens-Midtown Expressway, Maspeth N.Y. 11378
FAX 1-800-232-4432

1-800-221-8180
www.jandr.com
For PHONE ORDERS ONLY
Outside U.S.A. Call:
1-212

A/V Receivers



Onkyo TX-DS787
THX Select®/Dolby Digital/DTS Home Theater Receiver
•100w x 6 •THX Surround EX 7.1 processing •THX Select® certified •Component video switching (ONK TXDS787)

Call 1-800-221-8180

Yamaha HTR-5450

•100w x 5, Dolby Digital/DTS decoders, 26-mode Cinema DSP, remote ... **CALL**

Sony STR-DE875

•100w x 5, 32-bit Dolby Digital/Dolby Pro Logic/DTS decoders, 27 environment 32-bit DSP ... **CALL**

Sony STR-DE975

•110w x 5, 32-bit Dolby Digital/Dolby Pro Logic/DTS decoders, 27 environment DSP, remote ... **CALL**

Sony STR-DB1070

•100w x 6, Digital Cinema Sound, 2nd room A/V out with independent source select ... **CALL**

Onkyo TX-DS696

•100w x 5, Low-impedance design, Dolby Digital/DTS/Dolby Pro Logic II, on-screen display ... **CALL**

J&R MUSIC WORLD



www.jandr.com

America Online Keyword: J&R powered by INTERWORLD

Order 24 Hours A Day, 7 Days A Week **1-800-221-8180**

Jazz - Call To Order More Titles From Our Huge Inventory

Richard Elliot: Crush

CD \$13.99

Charlie Haden with Egberto Gismonti: In Montreal

CD \$12.99

Dave Douglas: Witness

CD \$12.99

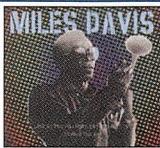
Eric Dolphy: Conversations

CD \$9.99

Conga Kings: Jazz Descargas

CD \$9.99

CHE 217



\$20.99
2-CDs

COL 85191
COLUMBIA

Dave Holland: Not For Nothin' CD \$12.99

ECM 14004

Greg Osby: Symbols Of Light (A Solution)

BN 31395CD

Susanna McCorkle: Most Requested CD \$11.99

CON 4976

Alfonzo Blackwell: Reflections CD \$11.99

SHM 5084

Ray Brown: Super Bass 2 CD \$11.99

TEL 05463

Separate Components

AudioSource

Was \$299.99

AudioSource AMP Two Power Amplifier

•80 watts per channel, switchable to 200 watts mono •Auto-on signal sensing •A/B speaker switching •Output meters

\$249.99

(ASO AMPTWO)

Gemini PA701

•Preamplifier, 4-inputs: aux/tuner/CD/phono, 19" rack mountable

\$99.99

AudioSource Amp 5.1

•100-Watt Monoblock Power Amp, fan cooled, stable to 1Ω, balanced/unbalanced inputs

\$129.99

Gemini XG-3001

•Power Amplifier, 200 watts/ch. @ 8Ω, fan cooled, 19" rack mount

\$249.99

TEAC A-H500

•Integrated Amplifier, 50 watts/ch. @ 8Ω, low-profile design, remote

\$369.99

Marantz AV-9000P

•Professional A/V Control Center, Preamp/tuner, Dolby Digital/DTS/THX Ultra, rack mount, remote ... **CALL**

Digital Audio Players



TDK MOJO™ Digital Jukebox

Portable MP3 CD Player
•Artist/title/album/music genre navigation •45-sec. anti-skip
•Plays CD-R/RW •Headphones, software & AC adaptor

\$99.99

(TDK MOJO)

Coby MP-CD500

•Portable MP3 CD Player, digital anti-skip (40 sec./CD/8 sec. MP3) \$69.99

Casio PZ-5000

•Personal/Car MP3/CD Player, 40-sec. Digital Shock Guard, MP3 directory play, car kit \$89.99

Sony CFD-S40CP

•CD (MP3-CD & CD-R/W compatible)/Radio/Cassette Portable Stereo, 20-AM/FM presets \$149.99

Aiwa XP-MP3

•Portable/Car MP3/CD Player, CD-R/CD-RW playback, 10-sec. E.A.S.S. Plus on-track system \$149.99

Sony NW-S4

•Sports Network Walkman® Digital Music Player, 64MB embedded memory up to 120 min. \$199.99

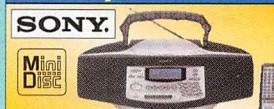
J&R MUSIC WORLD

Sony ZS-M35

MiniDisc/CD Personal Stereo
•MiniDisc recorder •CD player
•CD to MD recording •20-AM/FM presets •Mega Bass® •AC operation only •Remote

\$279.99

Sony MiniDisc



Sony MD-W74/8PK

•Blank MiniDiscs, 74-min. capacity, mail-in coupon for case from Sony (SON MDW74/8PK) \$14.99

Sony MZ-E300

•MiniDisc Walkman® Player, 20-sec. shock resistant memory, metallic blue, headphones \$99.99

Sony MZ-R500

•Skip-free G-Protection®, Digital Mega Bass®, ADMLP long time record/play (SON MZRS50LIVE) \$149.99

Sony MZ-R700DPC

•MiniDisc Walkman® Recorder/Digital PC Bundle, Digital PCLink, in blue or green \$229.99

Sony MZ-G750DPC

•MiniDisc Walkman® Player/Recorder Digital PC Bundle, AM/FM tuner/remote, Digital PCLink \$279.99

DVD Mini Systems



Sony DAV-S500

DVD DREAM™ System
•40 w x 5 + 80w subwoofer
•DVD/CD/SACD receiver •Dolby Digital/Dolby Pro Logic/DTS decoders •AM/FM •5 speakers + subwoofer •Remote (SON DAVS500)

Call 1-800-221-8180

Panasonic SC-DK10

•5-DVD/CD changer, Dolby Digital, Super Woofer, 300w, auto-rev. cassette, AM/FM, 5 speakers \$429.99

Panasonic SC-HT70

•5-DVD/CD changer, Dolby Digital, 6-ch. amp w/240w total, AM/FM, 5 speakers + subwoofer \$499.99

Sony DAV-C700

•50 w x 100w subwoofer, 5-DVD/CD/SACD changer/receiver, Dolby Digital, DTIS, 5 speakers **CALL**

Panasonic SC-HDA710/SC-HDX3

•DVD/Audio/Video 5.1-System, plays DVD audio & DVD video, Dolby Digital, (PAN SCHDAT710SY) \$699.99

Sony LS-V925

•DVD/CD Player in a DTS/Dolby Digital receiver + 60w subwoofer, center speaker & 4 satellite speakers. **CALL**

Mini Audio Systems



Sony CMT-CP100

Desktop Audio System
•35 watts/channel •CD player
•30-AM/FM presets •Full logic, auto-rev. cassette •Digital output for MD •Timer •Remote

\$249.99

(SON CMTCP100)

Aiwa NSX-AJ310

•60 watts/ch., 3-DVD changer, EQ, dual auto-rev. cassette, AM/FM, 3-way speakers, remote \$149.99

Panasonic SC-AK22

•70 watts/ch., 5-DVD changer, dual cassette, 24-AM/FM presets, remote \$149.99

Panasonic SC-PM11

•45 watts/ch., 5-DVD changer, 3-D Space EQ, auto-rev. cassette, 24-AM/FM presets, remote \$169.99

Sony CMT-RB5

•15 watts/ch., CD player, 30-AM/FM presets, timer, 2-way speakers, remote **CALL**

JVC FS-SD1000

•Executive Desktop System, 19w/ch., CD player, AM/FM, pole shaped speakers + subwoofer **CALL**

Mini Audio Systems



TEAC GF-300

Nostalgia Music System
•Rotary analog AM/FM tuner
•Front-loading CD player •3-speed turntable •Cassette deck •Headphone jack •Speakers

\$199.99

(TEA GF300)

TEAC GF-180

•Nostalgia System, AM/FM, turntable with 33/45/78 rpm speeds, 2 full range speakers \$99.99

Panasonic SC-PM25

•Advanced bi-amp configuration w/ Super Woofer, CD player, auto-rev. cassette, AM/FM \$199.99

Sony CMT-EX22

•Desktop, 15 watts/ch., CD player, AM/FM, PC audio input, piano lacquer finish speaker \$249.99

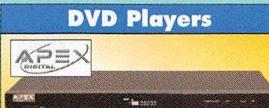
Panasonic SC-AK77

•Mini A/V, 370 watts total of 5 ch., 5-CD changer, dual auto-rev. cassette, 5 speakers, remote \$299.99

JVC MX-GT90

•460w total bi-amp, 3-DVD player, AM/FM, dual auto-rev. cassette, GIGA-TUBE subwoofer \$349.99

DVD Players



Apex Digital AD-500B

DVD Player
•Plays DVD/VCD/SVCD/CD-R & RW/HDCD/MP3, NTSC/PAL •Multiple angle •Zoom (2x/4x) •Dolby Digital/DTS/PCM ready

\$99.99

(APEX AD500B)

JVC XV-S45GD

•Component video outputs, HDCD® compatible, Dolby Digital/DTS compatible outputs \$169.99

Sony DVP-NS300

•Plays DVD/CD/R/MP3/CD-R discs, component video/Dolby Digital/PCM coaxial output \$149.99

Panasonic® DVD-RV31K

•Advanced surround, Cinema Mode, optical output for DTS/Dolby Digital decoders \$179.99

Apex Digital AD-800

•Plays DVD/VCD/SVCD/CD-R/CD-RW/MP3, NTSC/PAL, true progressive scan, Dolby Digital \$199.99

J&R MUSIC WORLD

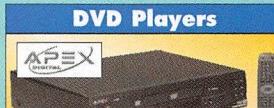
Apex Digital AD-7701

Universal DVD Player

•Plays DVD, VCD, SVCD, CD, CD-R, CD/RW, HDCD, DVD-Audio, SACD & MP3 •NTSC & PAL video outputs •Karaoke •Remote

\$299.99

DVD Players



Toshiba SD2715

5-Disc DVD Changer
•Plays up to 5 DVD/CD discs
•MP3 CD playback compatible
•S/composite video output •CD text compatible •Remote

\$219.99

DVD Changers



Toshiba SD2715

5-Disc DVD Changer
•Plays up to 5 DVD/CD discs
•MP3 CD playback compatible
•S/composite video output •CD text compatible •Remote

\$219.99

(TOS SD2715)

Apex Digital AD-5131

•3-disc, plays NTSC/PAL discs, decodes HDCD, remote \$179.99

JVC XV-M50BK

•Component video terminals, 10-bit/27Hz video D/A converters \$179.99

Sony DVP-NC300

•Smooth-Scan/Slow, output for Dolby Digital/DTS, Component video out, black or silver \$199.99

Panasonic® DVD-RP56

•Progressive scan MP3 play, cinema mode, optical digital output for DTS/Dolby Digital, remote \$229.99

Sony DVP-NC600

•5-disc, Block noise reduction, component video out, video enhancer, Dolby Digital/DTI/DTS out \$229.99

Sony DVP-N700P

•Progressive scan 480P output, full 3-2 reverse conversion, 12-bit/54MHz D/A converter for 480P **CALL**

Sony DVP-CX860D

•300+1 Disc Explorer™ management system, Dolby Digital/DTS output, disc flip mechanism **CALL**

Sony DVP-NS700P

•Progressive scan 480P output, full 3-2 reverse conversion, 12-bit/54MHz D/A converter for 480P **CALL**

Apex Digital AD-800

•Plays DVD/VCD/SVCD/CD-R/CD-RW/MP3, NTSC/PAL, true progressive scan, Dolby Digital \$199.99

J&R MUSIC WORLD

Apex Digital AD-800

•Plays DVD/VCD/SVCD/CD-R/CD-RW/MP3, NTSC/PAL, true progressive scan, Dolby Digital **CALL**

Audio Furniture



Elite EL-501

Audio Rack
•Tall- 54.75" •Tempered glass doors •5 shelves- 3 adjustable •Gray with silver accented front moldings •23" w & 24" h

\$179.99

(ELI EL501)

FurnitureWorks® RC1

Speaker Stands, for small speakers, adjustable height: 31"-45", black metal pr. \$69.99

Sansui Systems AT60Mi

•Mini System Stand, holds electronics at tabletop height with speakers on either side \$69.99

Standesign BB 75AH

•Speaker Stands, all metal, height is adjustable from 24" to 42", floor spikes pr. \$74.99

Elite EL-241

•Audio Cabinet, black lacquer, smoked glass doors, casters, 45.25" h

\$159.99

(ELI EL241)

Bell'O ATC-2101

•Audio Tower, metal with 5 glass shelves + gloss top can hold at least 10 A/V components **CALL**

Video Furniture



Bell'O AVSC-2103

A/V Table
•Metal frame with wood trim
•3 glass shelves plus top, which is ideal for TVs up to 36" •Cable Management System •40" w x 30" h x 24" d

(BLG AVSC2103)

Call 1-800-221-8180

Elite EL-505

Audio/Video Cabinet
•Wide cabinet accommodates TV's from 36" - 40" •2 side-by-side compartments

(ELI EL5

Hi-Fi Stereo VCRs**JVC HR-S3800U**

S-VHS Hi-Fi Stereo VCR
•VCR Plus+® with Cable Eye cable box •controller •4 heads
•Jog/shuttle •Front A/V inputs
•Remote

\$119.99

(JVC HRS3800)

Sharp VC-H820

•4 heads, 17-micron heads, auto clock-set, remote \$69.99

Samsung VR8160

•4 heads, auto clock set, 400 rewind, front panel A/V inputs, compact size, remote \$79.99

Panasonic® PV-V4521

•4 heads, auto clock set, commercial skip, front A/V jacks, universal remote \$89.99

Sony SLV-N51

•4 heads, AutoClock® set, commercial skip, fast rewind, instant replay, auto head cleaner, remote \$99.99

Panasonic® PV-V4621

•4 heads, VCR Plus+® SILVER, AllSet® channel mapping, auto clock set, tower remote \$119.99

J&R MUSIC WORLD®**WALK IN**
Park Row
NYC**PHONE IN**
800-221-8180
ANYTIME**LOG IN**
www.jandr.com
AOL Keyword: J&R**DVD Video- Call To Order More Titles From Our Huge Inventory****Basic Instinct- Special Edition** .DVD \$19.99**Blood Simple (1984)**DVD \$19.99**Blow (2000)**DVD \$19.99**Cast Away**DVD \$19.99**Chocolat (2000)**DVD \$19.99**Citizen Kane (1941)**DVD \$24.99**Crouching Tiger, Hidden Dragon**DVD \$19.99**Die Hard Trilogy- Ultimate Collection** 6-DVDs: \$54.99**Star Wars® Episode One****Phantom Menace (2000)****\$22.99****DVD****Doctor Zhivago (1966)**DVD \$19.99**Driven**DVD \$19.99**Exit Wounds**DVD \$19.99**Fawlty Towers- Complete Series**DVD \$49.99**Fiddler On the Roof (1971)**DVD \$13.99**Final Fantasy (2001)**DVD \$19.99**Forrest Gump (1994)**DVD \$19.99**French Connection (1971)**DVD \$19.99**Hi-Fi Stereo VCRs****SONY.****Sony SLV-N81**

Hi-Fi Stereo VHS VCR
•4 heads •Reality Regenerator™

•Advanced Quickset™ timer •VCR Plus+® Gold •AutoClock® set
•Commercial Pass™ •Remote

\$149.99 (SON SLVN81)

Panasonic® PV-V4611

•4 heads, VCR Plus+®, auto clock set, commercial skip, remote \$99.99

JVC HR-S5900

•SVHS, 16 heads, 19μ heads, VCR Plus+® cable box ready, insert editing, remote \$169.99

Go-Video® DDV-2110

•Dual Hi-Fi Stereo VCRs, 4 heads, jog/shuttle, commercial/movie advance, remote \$229.99

Samsung SV5000W

•Worldwide Hi-Fi Stereo VHS VCR w/worldwide tape conversion/TU tuning/video play/power.\$399.99

JVC HR-S900

•High res. S-VHS/S-VHS ET recording, 4 hd., DigiPure technology w/4MB frame memory.....\$399.99

Camcorders**Samsung SCL650**

Hi8 Camcorder
•2.5" TFT color LCD •22x optical/500x digital zoom
•Wide angle lens •Auto macro •Snapshot mode
•6-mode program AE •Remote

\$329.99 (SAM SCL650)**Digital Camcorders****Sony DCR-TRV17**

Digital Handycam® MiniDV Camcorder
•680K CCD •10x-optical/120x-digital zoom •3.5" SwivelScreen®
•4 MB Memory Stick® •Color viewfinder •Super SteadyShot®
•Li-Link®/USB (SON DCRTRV17)

Call 1-800-221-8180**Panasonic® PV-DV51**

Digital Palmdisc® Mini DV, 2.5" color LCD, 18x-optical/300x-digital zoom, PhotoShot®\$499.99

Canon ZR25MC

•2.5" color LCD, 10x-optical/200x-digital zoom, image stabilizer, progressive photo\$699.99

JVC GR-DVM75U

•Digital Cyber-shot® MiniDV Camcorder, 2.5" color LCD, 10x-optical/200x-digital zoomCALL

Sony DCR-PC110

•2.5" SwivelScreen, 1,070K pixel CCD, Carl Zeiss® variomatic Lens •10x optical/120x digital zoomCALL

Sony DCR-VX200

•Three 1/3" CCDs, Memory Stick® •VGA 640 x 480 still image res., 12x optical/48x digital zoomCALL

Digital Camcorders**Panasonic® PV-DV951**

Digital Palmcorder® Mini DV Camcorder
•3 CCD •3.5" color LCD •10x-optical/100x-digital zoom •Digital still camera •16MB SD card reader •LINK™ (PAN PVDV951)

Call 1-800-221-8180**JVC GR-DVL510**

•MinDV, 80K-pixel CCD, 2.5" color LCD, 10x-optical/400x-digital zoom, 8MB MultiMedia cardCALL

Sony DCR-TRV30

•Digital Handycam, 2.5" color SwivelScreen, 18x-optical/500x-digital zoom, Memory Stick®CALL

Sony DCR-PC9

•2.5" SwivelScreen™, color viewfinder, Carl Zeiss® 10x optical/120x digital zoom, 4MB Memory Stick®CALL

Sony DCR-TRV30

•1.550 CCD, 10x-optical/120x-digital zoom, 3.5" SwivelScreen®, 4MB Memory Stick®CALL

Canon GL1

•3CCD image sensors, 20x Flurite-optical/100x-digital zoom, 2.5" LCD view screen, stabilizerCALL

Digital Cameras**Olympus C-4040 Zoom**

Digital Camera
•4.1MP •3200 x 2400 max. •3x optical/7.5x digital zoom •16MB SmartMedia™ •QuickTime™ •Flash •USB •Remote

\$899.99 (OLM C4040ZOOM)**Pentax EI-100**

•1.3 megapixel, 8MB memory, 2x digital zoom, 1.8" color LCD, Li-ION\$179.99

Sony DSC-P20

•1.3 megapixel CCD image sensor, 3x optical zoom lens, up to 1280 x 960 res., 1.5" LCD\$249.99

Kodak DX3500

•2.2 MP CCD, 8MB memory, 3x digital zoom, 1.8" LCD, flash, batteries, USB\$249.99

Canon PowerShot S10

•Digital ELPH, 2.11MP 1620 x 1220 max., 2x-optical/5x-digital zoom, 1.5" color LCD\$479.99

Fuji FinePix 4800 Zoom

•2.4 MP CCD, up to 1600 x 1200, 3x-optical/3.75x-digital zoom, 2" color LCD\$499.99

Cameras**Nikon N80 Kit**

35mm Autofocus SLR Camera Kit
•5-area AF •Focus tracking with Lock-On™ •Built-in AF-assist illuminator •Speedlight •28-80mm lens, battery & strap

\$529.99

(NKN N80KIT)

Pentax ZX-30QD Kit

•35mm AF-SLR, 6-picture/4-exposure modes, quartz date stamp, 35-80mm zoom, battery & case\$299.99

Minolta MAXXUM HTSi PLUS

•Auto SLR, 28-80mm zoom, 3-pt. crosscut autofocus, flash + wireless remote flash control\$329.99

Canon EOS Rebel 2000KT

•Automatic SLR, 28-80mm lens, 7-pt. autofocus, 35-zone metering, neck strap & batteries\$349.99

Nikon N65® Kit

•35mm Autofocus SLR, 6-segment 3D matrix metering, 28-80mm lens, strap, batteries & film\$349.99

Contax G2 Kit

•35mm Autofocus Rangefinder, 4-frame/sec. integrated motor drive, 45mm lens\$1299.99

(SMA SUR20)

(SMA SUR20)

Sima SUR-20

Universal IR Remote Control
•Controls up to 8 devices, each with its own touchscreen •Learning capable + preprogrammed codes •Auto LCD backlight •20+ macros

\$99.99

(SMA SUR20)

Sony RMV-201

•Universal Remote, controls up to 4 devices-TV/VCR/DVD/cable\$9.99

Jensen TV-620

•Indoor/Outdoor Antenna, passive design, 6-position fine tuning control, HDTV loop\$14.99

TERK TV55™

•Indoor/Outdoor TV/Video Antenna, amplified, optimized for HDTV\$79.99

Sony RM-AV2100

•Universal Remote, controls up to 12 A/V components, LCD touchscreen, 15 macrosCALL

Philips TSU2000 Pronto

•Intelligent Remote, total control of almost all infrared receiving devices, LCD touchscreen\$269.99

Color TV**Toshiba 20AF41**

20" FST Pure™ fine pitch flat picture tube •Advanced velocity scan modulation •3-line digital comb filter •Remote

\$299.99 (TOS 20AF41)**Stereo Color TV****Sony KV-27FS13**

27" FD Trinitron® WEGA® Stereo Color TV
•Flat picture tube •Component video input •16:9 enhanced mode •3-line digital comb filter •Speed Surf™CALL

Call 1-800-221-8180**Sony KV-24FV12**

•24" FD Trinitron® WEGA® stereo, flat picture tube, 3-line digital comb filter, Speed Surf™CALL

Samsung TXK2067

•20" stereo, flat picture tube, contrast enhancement circuitry, A/V inputs, remote\$189.99

Samsung TXK2567

•25" stereo, up to 600 lines horizontal res., comb filter, dark tint picture tube, remote\$249.99

Sony KV-20FV12

•20" FD Trinitron® WEGA®, stereo, flat picture tube, 3-line digital comb filterCALL

Panasonic® CT-27SX11

•27" stereo, PureFlat™ picture tube, 3-line digital comb filter, surround sound\$499.99

Pro Video**Sony DSR-PD150**

DVCAm™ Digital Camcorder
•Records on mini-DVCAm™/DV tapes •3- 1/3" HAD CCD's •12x-optical/48x digital zoom •2.5" color LCD •Digital still w/Memory Stick® (SON DSRPD150)

Call 1-800-221-8180**Panasonic® AG-1980**

•Pro Hi-Fi Stereo VHS VCR, digital TBC & digital noise reduction, insert-assemble editing\$999.99

Panasonic® AG-DV1000

•Pro MiniDV VCR, composite video/S-video/audio analog inputs/outputs, 3D-Y/C separation\$999.99

JVC SR-VS20U

•Pro MiniDV/Super Hi-Fi Stereo VCR, DVCAm™ play, simultaneous playback of 2 sources\$1379.99

Sony DSR-PPD100A

•DVCAm™ Digital Camcorder, Three 1/4" 380K CCD's, 12x-optical/48x-digital zoom, 3.5" color LCDCALL

Sony PFM-42B1

•42" SuperSlim™ Flat Panel Monitor, no tuner, high-res. flat panel, charcoal or silverCALL

TiVo/Replay TV**Philips TiVo HDR612**

Personal TV Receiver
•Ultimate TV viewing control
•Records digitally up to 60 hr. •33.6Kbps modem •Remote

•TiVo service plans: \$9.95/mo. or \$199/lifetime subscription

\$499.99 (PHI HDR612)

(PAN PHVH2000)

Panasonic® PV-HS2000 ShowStopper™ Hard Disk Recorder

•Up to 30 hr. disk storage •Personalized & theme-based channels through ReplayTV™ Service •Compatible with cable & DBS systems •Theme-based channels •7 second instant replay •On-screen guide •Remote

\$449.99 (PAN PVHS2000)

(PAN PVHS2000)

SE HABLA ESPANOL

For PHONE ORDERS ONLY
Outside U.S.A. Call:
1-212-406-7077

Order Code SR111

SHOP BY PHONE
24 HOURS A DAY
7 DAYS A WEEK

FROM ANYWHERE IN THE USA
J&R Music World, 59-21 Queens-Midtown Expressway, Maspeth N.Y. 11378
FAX 1-800-232-4432

1-800-221-8180
www.jandr.com
America Online Keyword: J&R

For PHONE ORDERS ONLY
Outside U.S.A. Call:
1-212-406-7077



Digital VCRs/Combos



Samsung DVD-V1000

DVD Player/VHS Hi-Fi Stereo VCR
•Plays CDs/CD-R/DVD •Virtual 3D surround •Component video output •4 head VCR •Dolby Digital/DTS outputs •Remote

\$299.99 (SAM DVDV1000)

Go-Video® DVR4000

DVD Player/Hi-Fi Stereo VHS VCR, Dolby Digital/DTS digital output, 4 heads, remote **\$299.99**

Panasonic® PV-D4761

DVD Player/Hi-Fi Stereo VHS VCR, Dolby Digital/DTS decoder, picture zoom, remote **\$349.99**

Go-Video® DDMV7000

•Mini DV/S-VHS Hi-Fi Stereo Dual Deck, supports Mini-DV, S-VHS & VHS formats **\$1099.99**

JVC HR-DVS2

•Mini DV/S-VHS Hi-Fi Stereo Dual-Deck VCR, play MiniDV tapes & dub/edit to S-VHS/VHS **CALL**

JVC HM-HDS1U

•Hard Disk Recorder (40GB) /S-VHS Hi-Fi Stereo, assemble editing **CALL**



www.jandr.com

America Online Keyword: J&R

DVD Video- Call To Order More Titles From Our Huge Inventory

Gladiator (2000)	DVD \$21.99
Hannibal (2001)	DVD \$19.99
Matrix (1999)	DVD \$19.99
Memento	DVD \$19.99
Mummy Returns	DVD \$19.99
One Night at McCool's (2001)	DVD \$19.99
Planet Of The Apes- Complete Box Set 6-DVDs	DVD \$69.99
Robocop (1987)	DVD \$13.99



Godfather Collection
\$74.99

Snatch	DVD \$19.99
Silence Of The Lambs (1991)	DVD \$19.99
Snow White & The Seven Dwarfs (1937)	DVD \$19.99
Spy Kids	DVD \$19.99
Terminator (1984)	DVD \$19.99
Total Recall- Special Edition	DVD \$19.99
Traffic (2000)	DVD \$19.99

Apple® Macintosh®



Apple® iBook® G3/500MHz 64/10GB/CD 12.1' XGA

•500MHz PowerPC™ G3 processor •64MB SDRAM •10GB HD •24x max. CD-ROM •8MB VRAM •V.90 modem •10/100BASE-T •Mac® OS9.1 •iMovie™ 2

\$1299.99 (APP M7698LL/A)

Apple® 15" Flat Panel Studio Display
•Ultra-thin •15" active-matrix liquid crystal display
•Up to 1024 x 768 pixel resolution •Touch-sensitive buttons with visual feedback •Anti glare •2-port self-powered USB hub

\$599.99 (APP M7928ZM/A)

PowerPC & the PowerPC logo are trademarks of International Business Machines Corporation, used under license therefrom

TDK DVD Media



TDK® DVD-RAM5.2 ReWritable DVD Disk

•5.2GB recording capacity •Ideal for all multimedia, archiving & backup operations •Double sided

\$21.99 (TDK DVD-RAM5.2)

TDK® DVD-RAM2.6 ReWritable, 2.6GB capacity, single sided

\$19.99

TDK® DVDR4.7 Recordable DVD Disk
•4.7GB capacity
•Single-sided

•Write Once •Felt-tip pen labeling •Playable on all DVD-ROM drives & DVD video players

\$19.99 (TDK DVDR4.7)

TDK® DVDR3.9 Recordable DVD disk, write once, 3.9GB capacity

\$21.99

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

Video Add-Ons

peerless



Peerless PM1327

TV™ Mount
•Wall mount with adjustable tray & telescoping wall arm fits TVs 13"-27" •3-position forward tilt •100 lb. max. •Black or white

\$54.99 (PER PM1327-BK) (PER PM1327-WH)

Sima Video CopyMaster™

•Digital Image Stabilizer & Video Enhancer, (SMA SEDC) **\$49.99**

TERK VS-4

•Video Selector, connects up to 4 A/V components & a set of powered speakers to a TV **\$49.99**

Sony VCT-D680RM

•Remote Control Tripod, expands from 19" to 57" 2-way pan head **\$89.99**

Sony HVL-FDH3

•3-Watt Flash/Video Light, flash for still pictures, video light for moving pictures ... **\$119.99**

JVC JX-S777

•Digital A/V Switcher, 8-line input/5-line & monitor output, remote **\$599.99**

Computer Peripherals



Pioneer DVR-A03 Internal IDE DVD-R/RW Writer
•Writes & reads

DVD-R/RW & CD-R/RW formats
•Reads CD-Text, Photo CD & Audio CD •For PC/Mac

\$799.99 (PIO DVR-A03)



Apple® 15" Flat Panel Studio Display
•Ultra-thin •15" active-matrix liquid crystal display

•Up to 1024 x 768 pixel resolution •Touch-sensitive buttons with visual feedback •Anti glare •2-port self-powered USB hub

\$599.99 (APP M7928ZM/A)

PowerPC & the PowerPC logo are trademarks of International Business Machines Corporation, used under license therefrom

GPS Navigational



Garmin StreetPilot® III Talking Automotive GPS
•Calculates a route & displays street names & turns with voice prompts •3.4" color display

\$999.99 (GAR STREETPILOT)

Magellan GPS 310™ GPS Navigator, 12-channel, data output for PC interface, waterproof, (MGN GPS310) **\$99.99**

Garmin Industries eTrex® GPS Satellite Navigator, tracks up to 12 satellites, stores 500 waypoints (GAR ETX) **\$129.99**

Magellan MAP 330M™ Marine Handheld GPS Receiver, 7MB downloadable memory (MGN MAP330M) **\$269.99**

Magellan MAP 330X™ Portable GPS Mapping Satellite Navigator, 12-parallel channel receiver (MGN MAP330X) **\$299.99**

Magellan GPS 750M™ Vehicle GPS Satellite Navigator, maps/voice commands, for all US & Canada (MGN GPS750M) **\$1899.99**

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED BRAND NEW, FACTORY FRESH & 100% GUARANTEED. Some quantities may be limited. Copyright 2001 J&R Music World, City of N.Y. Dept. of Consumer Affairs License Number 0900310/0900615/0900616/0900617

To ORDER BY MAIL: SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No., expiration date & signature) To: J&R Music World, 59-21 Queens Midtown Expwy, Maspeth, Queens, NY 11378. Personal & business checks must clear our Authorization Center before processing. Shipping, handling & insurance charges for standard shipping or for shipment by air, or to Canada, Hawaii, Alaska, Virgin Islands & Puerto Rico, please CALL FOR INFORMATION. Prices effective through November 30, 2001.

DO NOT SEND CASH. Sorry, no C.O.D.'s. NY residents please add sales tax.

ORDERS SUBJECT TO VERIFICATION & ACCEPTANCE, NOT RESPONSIBLE FOR TYPOGRAPHICAL OR PICTORIAL ERRORS. ALL MERCHANDISE SHIPPED

Panasonic®

DVD-RP91

Features:

VIDEO

- DVD Ram Video Playback
- Progressive Scan
- 54 MHz/12-bit Video D/A Converter
- MPEG Digital Noise Reduction
- Picture Control
- Gamma Correction
- Monitor Select
- Switchable Component Video Out (480p/480i)
- Still Picture Display (I/P/B)
- Auto Switching Field/Frame Still
- Frame Advance (forward/reverse)
- Black Level Control

DIGITAL



DOLBY DIGITAL



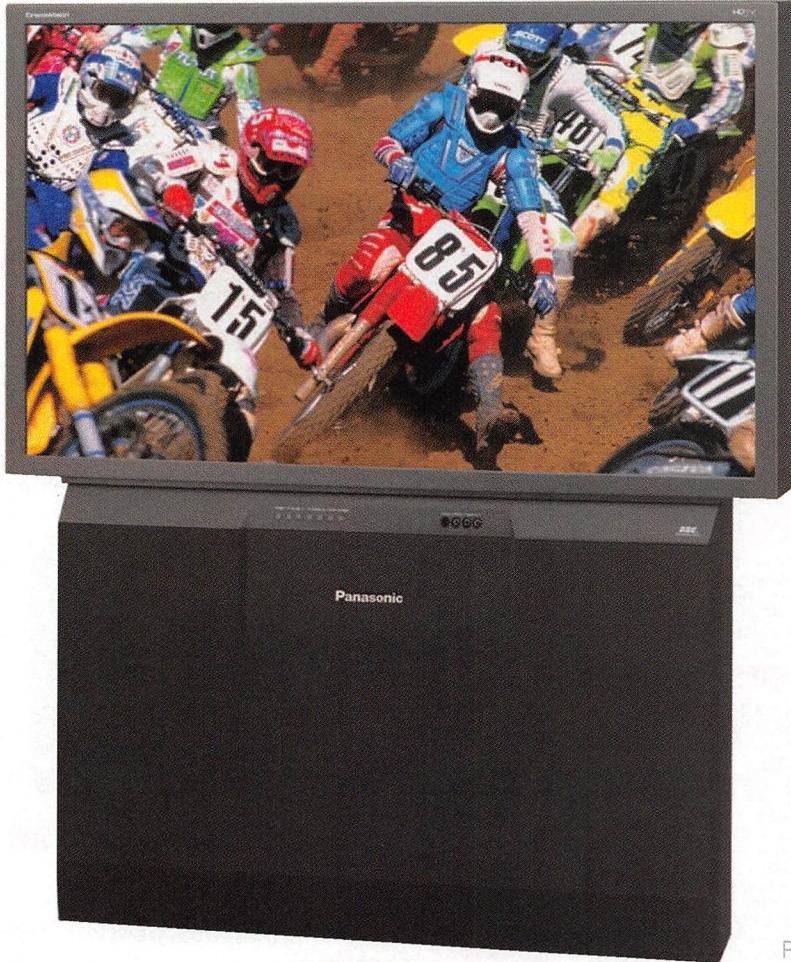
AUDIO

- 192 kHz/24-bit Audio D/A Converter
- DVD-Audio/Video Playback
- Digital Re-Master Processing for CD/DA Playback
- Audio Only Function
- Virtual Battery Operation
- Built-in DTS® & Dolby® Digital
- 5.1 Ch. Surround Decoder with Speaker Setting
- Dual Digital Audio Out (coaxial/optical)
- Headphone Jack with Volume Control
- Dynamic Range Compression
- Advanced Surround (v.s.s.)
- Cinema Mode
- Dialog Enhancer
- Headphone Surround (v.s.s.)

New!

EASY OPERATION

- Illuminated Joystick Remote Control
- DVD/CD Text Display
- Disc Memory
- CD-R/RW Playback
- Twin Laser Pickup for DVD/CD Playback
- Disc Stabilizer
- High-Speed Smooth Motion Scan (5 speed up to x100)
- Quick Start
- Chapter Preview
- On Screen Menu Icons (new GUI)



PT-47WX49

Features:

- 47" Diagonal HDTV Monitor Projection TV
- HDTV (1080i/480p)
- 16:9 Aspect Ratio
- Lens System - Hi Res, 5-Element
- Natural AI (Artificial Intelligence) Picture
- Noise Reduction - Luminance YNR
- Progressive Cinema Scan
- Progressive Scan Doubler (31.5 KHz)
- Screen - VVLL Brightness Uniformity
- Velocity Modulated Scan (Digital)
- Wideband Video Amplifier
- 9 Point Menu Convergence Control
- 15W x 15W Amplifier
(Driven into 8 ohms with less than 10% THD from 20Hz-20kHz)
- BBE High Definition Sound
- Spatializer 3D Stereo Sound
- A/V Jacks - Front Panel
- A/V Component Video Inputs - Y,Pb,Pr
- A/V Jacks - S-Video Inputs
- Audio Output Jacks - Fixed/Variable
- Audio Programmable Scan
- Channel Banner
- 2-Tuner PIP with Split-Screen Display
- Universal Home Theater Remote
- New Cabinet / Pedestal Design

Dimensions:
50.2'H x 43.7'W x 25.2'D

Weight: 175 lbs.

**12 Months
No Payment
No Interest***
O.A.C.

8/30/01 thru 1/27/02

ONE CALL.COM
the only call~

Hardware & Advice

Accessories • Book Shelf • Camcorders • CD CDR • Dolby Digital • DTS • DSS • DVD • Home Theater Interconnects • MD • MP3 • Phones • Portable AV • Processors Projector TV • PVR • Receivers • Separates • Speakers • THX • TVs • VCRs

www.onecall.com
1-800-540-0900
onecall@oncall.com



7 Days a Week 6am to 8pm PST 422 W. Riverside Suite 408 Spokane, WA 99201

FedEx
Express

*FedEx service marks used by permission

HDTV
1080i/480p

It's like having two TVs in one. So you'll catch all the action of 4th down and bottom of the 5th without the help of your VCR.



*Offer is subject to credit approval by Monogram Credit Card Bank of Georgia. Applies to purchase of authorized product made between LIST START DATE, 2001 to LIST END DATE, 2001 on the GECAF consumer credit card account. No finance charges assessed and no monthly payments required on promotional purchase amount (excluding optional insurance charges) if you pay this amount in full by the payment due date as shown on the twelfth (12th) monthly billing statement after the purchase date. If you do not, finance charges will be assessed on promotional purchase amount from purchase date and minimum monthly payments will be required on balance amount. If minimum monthly payments on any other balances on your account (including optional insurance charges) are not paid when due, all special promotional terms may be terminated. Standard account terms apply to non-promotional balances and, after promotion ends, to promotional purchases. Variable APR is 21.98% as of July 17, 2001 (in PR, fixed APR is 22.48%). Fixed APR of 24.75% applies if payment is more than 30 days late, except in PR. Minimum finance charge is \$1 (\$0 in PR).

ONE CALL.COM

TECH-TALK

"See our Website for details"

SONY®

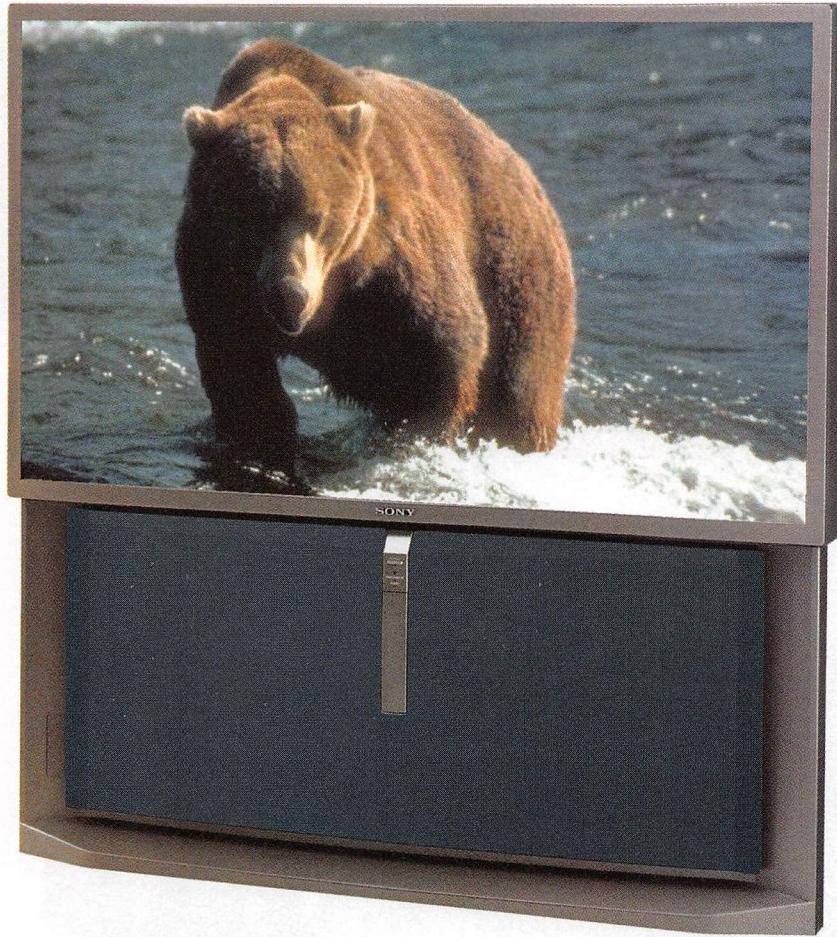
DVP-NS900V

DVD Player

New!

Key Features:

- Progressive Video Output with 3:2 Pulldown
- Dolby Digital™ & dts® 5.1 Channel Processing
- SACD Multi Channel Playback
- Dynamic Tilt Compensation
- Block Noise Reduction
- Digital Video Enhancer
- 12bit / 54MHz Video DAC (for 525P)
- High Quality Audio Parts



KP-51HW40 Projection TV

Key Features:

- Wide, 16:9 Aspect Ratio Screen
- Hi-Scan 1080i™ Chassis
- Digital Reality Creation™ MultiFunction Circuitry
- CineMotion™ Reverse 3-2 Pull-Down Technology for Superb Display of Material Shot Film
- Multi-Image Driver™ x (MID™ x) Circuitry
- Scrolling Channel Index (4 channels)
- Built-in High Contrast Protective Screen with AR (anti-reflection) Coating
- Two HD Capable Component Video Inputs (Y/Pb/Pr)

Other Features:

- TruSurround™ Virtual Dolby Surround® Sound
- Snap Shot Screen Freeze
- Super-Fine Extended Definition MICROFOCUS™ Picture Tubes
- MICROFOCUS™ Lens Systems
- BrightView™ Dual Component Screen with Higher-Contrast Lenticular Design
- Enhanced 3D Digital Comb Filter
- Advanced Picture Stabilizer
- Advanced Velocity Modulation™ Scanning
- 40 Watts Total Audio Power Output¹
- Flexible Twin-View™ 2-Tuner Picture-in-Picture (HD, NTSC)
- Freeze Memo
- Flash Focus™ Fully Automatic Digital Convergence System
- Program Palette™ Picture Presets
- Multi-Language Display
- Favorite Channel (8 channels)
- Easy Setup Guide
- V-Chip Parental Control
- Energy Star Compliant
- One Front, Three Rear Audio/Video Inputs
- One Front, Two Rear S-Video Inputs
- S-Video Detection
- Control S Input/Output
- Sony's At Your ServiceSM Customer Support²
- Supplied EZ Flip™ Luminous Joystick Remote

¹Power output: all channels driven into 8 ohms, 50 Hz - 20,000 Hz at no more than 10% THD, measured from auxiliary input to load.

²Sony At Your ServiceSM: all repairs are subject to the terms of the limited warranty applicable to your analog PJTV. This guarantee applies to faults with the set that impair viewing or listening. Cosmetic defects and the Remote Commander unit do not apply.

Sony At Your Service is a comprehensive customer support program provided during the initial manufacturer limited warranty period of one year from the date of purchase for both parts and labor. The terms of the program do not apply for events beyond Sony's reasonable control such as acts of God, civil or military authorities, fires, strikes, floods, epidemics, war, riot, government rules, regulations or delays in transportation or shortages. Sony At Your Service is not available in Alaska or Hawaii.

ONE CALL.COM

~the only call~

Hardware & Advice

Accessories • Book Shelf • Camcorders • CD
CDR • Dolby Digital • DTS • DSS • DVD • Home Theater
Interconnects • MD • MP3 • Phones • Portable A/V • Processors
Projection TV • PVR • Receivers • Separates • Speakers • THX • TVs • VCRs

www.onecall.com

1-800-540-0900

onecall@onecall.com



FedEx
Express

*FedEx service marks used by permission

7 Days a Week 6am to 8pm PST 422 W. Riverside Suite 408 Spokane, WA 99201

Real People
Real Fast
Real Smart
Real Cheap

Home Theater Projectors At A Price You Can't Live Without!

SONY

Cineza VPL-HS1 *Big-screen excitement, anytime, anywhere.*

Accepts composite video, S-video, PlayStation, Memory Stick and more. SVGA (800 x 600), 700 lumens, sharp contrast, 8.6 lbs. Sony optimized video processing, and horizontal and vertical keystone correction for a perfectly square image.

Blow-Out Price \$2999⁰⁰

TOSHIBA

TLP-MT7 *Home theater for any room.*

WXGA (1280 x 720), true 16:9 720p HDTV resolution. Bright 1000 lumens and high contrast ratio. Connects to computer and video sources. Whisper quiet operation. Small footprint and just 11.7 lbs. Hang it from the ceiling, or play it from your coffee table.

Blow-Out Price \$5295⁰⁰

SANYO

PLV-60HT *Ultimate cinema experience.*

Native 16:9 LCD panel for wide-screen video at true 720p HDTV broadcast resolution. 1366 x 768 pixels and 1200 lumens for brilliant clarity. 700:1 contrast ratio for rich cinema black and bright white. Power lens shift for installation flexibility. Accepts computer and video sources.

Blow-Out Price \$4799⁰⁰



ProjectorPeople[®].com

Call 877-845-0040 M-F 8-8 EST. or order online at www.projectorpeople.com

Ask about our **Ticket to Success Reseller Program.**

Wish kid Scimra, age 8

The shortest distance between two people.

A pie in the face.

What a wish gives a child who is sick.

laughter

If you know a child with a life-threatening illness, call 1-800-722-WISH or visit www.wish.org.

MAKE A WISH.

WANT HOME THEATER? CALL THE LEADER!

AMERICAN THEATER SYSTEMS

FOR THE BEST SERVICE, SELECTION AND...

GUARANTEED LOWEST PRICES!



**DTV, PLASMA,
FRONT &
REAR PROJECTION
TV EXPERTS**

AMERICAN THEATER SYSTEMS specializes in the design and installation of complete home theater environments. Our custom system designers will guide you through the selection of components for a home theater that truly reflects your own signature style.

A tradition of quality craftsmanship and unquestionable excellence has made **AMERICAN THEATER SYSTEMS** the most prestigious home theater and electronics source. We are the fastest-growing custom residential installation team on the east coast, boasting 23 years of hands-on experience with the most sophisticated systems.

Whether you're an avid audiophile, videophile, or just looking for the best value, we listen to your needs. We've got it all—high-end audio, video, home automation, lighting and home theater systems—in all price ranges. Everything you want is just a toll-free call away!

**ACCUSONIC ★ AIWA ★ ATI ★ ATLANTIC ★ AUDIOSPECIALIST ★ BIC ★ B&K
CANTON ★ CELESTION ★ CINENOVA ★ CRESCENDO ★ DA-LITE ★ DENON
DRAPER ★ DVDO ★ DWIN ★ EARTHQUAKE ★ ENERGY ★ FAROUDJA ★ FUJITSU
GALLO ★ HARMAN KARDON ★ HITACHI ★ KEF ★ KENWOOD ★ KLIPSCH ★ JVC
LEXICON ★ MARANTZ ★ MITSUBISHI ★ M&K ★ MONITOR AUDIO
MONSTER CABLE ★ NAD ★ NAKAMICHI ★ NILES ★ NHT ★ ONKYO ★ PANAMAX
PARASOUND ★ PHASE TECH ★ PINNACLE ★ PIONEER ELITE ★ POLK ★ PSB ★ RBH
RUNCO ★ SHARPVISION ★ SNELL ★ SONY ES ★ SONANCE ★ SPEAKERCRAFT
VEODYNE ★ VIDIKRON ★ WIREWORLD ★ YAMAHA ★ ZENITH & MORE!**

**AMPLIFIERS ★ RECEIVERS ★ DECODERS ★ SPEAKERS ★ SUBWOOFERS ★ SACD
PROJECTION TVs ★ PLASMA TVs ★ HDTV ★ CD/DVD PLAYERS ★ IN-WALL SPEAKERS**

We Carry All Major Brands for Custom Installation

**Call Toll-Free for Best Advice
& Guaranteed Lowest Prices!**

1-800-889-5845

FAX 732-545-1101 • LOCAL PHONE 732-565-0440

www.amsound.com

**WE DESIGN
& INSTALL
HOME
THEATER
NATIONWIDE**

**CUSTOM
INSTALLERS
WHOLESALE
PROGRAM
LOW PRICES!**

**Call 24 Hours—7 Days a Week!
Nationwide Custom Installation**

30-day defective exchange from date of receipt. All returns for refund must be made within 10 days of receipt of goods and may be subject to a restocking fee. Items must be in original condition and packaging. Shipping/handling not refundable.

Abt Electronics

**Total Customer Satisfaction
Since 1936**

AbtElectronics.com

JVC

GO

JVC Mini Hi-Fi Stereo System

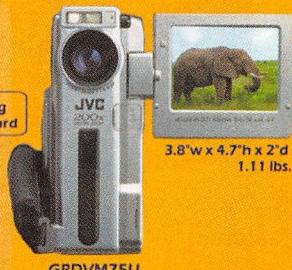
- Top Loading CD Player
- Digital AM-FM Tuner
- Slim Aluminum Stick Speakers
- 60 Watt Subwoofer
- Clock & Timer
- Full Function Remote Control



\$499
Free Shipping
+\$50 Gift Card

JVC Mini DV Camcorder

- 2.5" Color LCD
- 680,000-Pixel CCD Image Sensor
- Removable Flash Memory
- 200x Digital Zoom
- i.Link / USB Connection
- Free Camera Case and Tripod



\$1,099
Free Shipping
+\$100 Gift Card

**Sound & Vision Readers
Use Abt Code PROSV1101
For Gift Card Savings**

SEARCH www.Abtelectronics.com

800.355.4830

**9000 Waukegan Rd.
Morton Grove, IL**

- Authorized Online Retailer
- Guaranteed Availability
- Expert Customer Service
- Complete Selection of Quality Name Brand Electronics
- Free Shipping



**BETTER BUSINESS BUREAU
AWARD WINNER
FOR MARKETPLACE ETHICS**

Canon

are you digital yet?™

optura100 MC

Free Hardware Offer Card Read & Writer

ONE CALL.COM
TECH-TALK

"See our Website for details"

-Factory
Authorized
Dealer-



OPTICAL ZOOM

10x
200x
DIGITAL ZOOM

Features:

- Digital Video Format & IEEE 1394
- 1.33 Megapixel CCD
- Optical Image Stabilizer
- Precision Canon Optical Zoom Lens
- Built-in Flash & Advanced Accessory Shoe
- Progressive Photo
- MultiMediaCard & SD Memory Card Compatible
- Color Viewfinder & 2.5" LCD Screen
- Programmed Auto Exposure
- Manual Controls
- Digital Effects, Faders & Special Effects
- PCM Digital Stereo Sound
- IEEE 1394 Input & Output Terminal
- Video & Audio Inputs & Outputs

Additional Features:

- Multi-Angle Hand Grip
- Tally Lamp
- Extended Recording Function
- Photo Search
- time Code
- Data Code
- Remote Control
- LANC

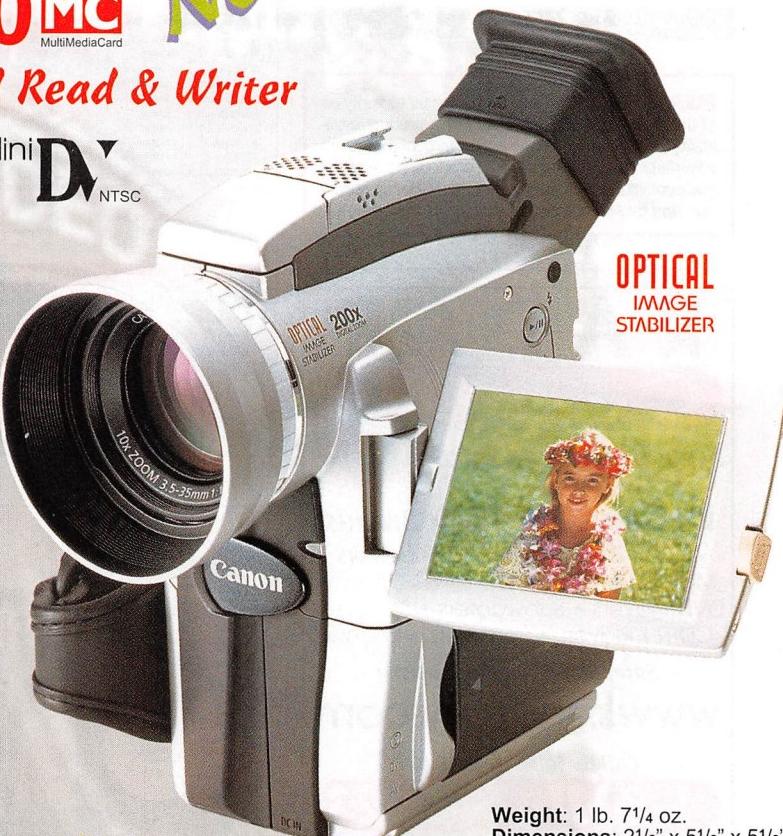
Accessories:

- Lens Adapters & Filters
- Audio Accessories & Video Light
- Power Source
- Creative accessories
- Carrying Cases
- Digital Videocassettes
- Cables

ADVANCED ACCESSORY SHOE

Mini DV NTSC

New!



Weight: 1 lb. 7 1/4 oz.
Dimensions: 2 1/2" x 5 1/8" x 5 1/8"

ZR25 MC

MultiMediaCard



Weight: 19 oz.
Dimensions: 2 1/4" x 4" x 5 1/4"

IMAGE STABILIZER

10x
200x
DIGITAL ZOOM

-Apply Online-

1234 567 890 123
1/02
Preferred Customer!

FedEx
Express

FedEx service marks used by permission

On Special!

Free Software Offer

Features:

- Multimedia Card and SD Memory Card Technology
- Mini-DV Format
- Color Viewfinder
- 2.5" Color LCD Viewscreen
- 10x Optical Zoom/200x Digital Zoom
- Built-in Stereo Condenser Mic
- Image Stabilizer
- Digital Photo Mode
- IEEE 1394 Digital Video In/Out Port
- Analog Video In/Out Ports
- Program Auto Exposure
- AE Shift
- Digital Effects
- Microphone Terminal
- Lithium Ion Power
- Wireless Remote Controller
- Progressive Photo Mode



Mini DV

ONE CALL.COM
~the only call~

Hardware & Advice

Accessories • Book Shelf • Camcorders • CD
CDR • Dolby Digital • DTS • DSS • DVD • Home Theater
Interconnects • MD • MP3 • Phones • Portable A/V • Processors
Projection TV • PVR • Receivers • Separates • Speakers • THX • TVs • VCRs

www.onecall.com
1-800-540-0900

onecall@oncall.com

7 Days a Week 6am to 8pm PST 422 W. Riverside Suite 408 Spokane, WA 99201



FOR SALE

Wholesale Connection

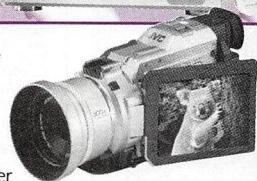
www.wholesaleconnection.com



This Month's Special

Mini DV

JVC
GRDV2000
1.92 Megapixel
Digital Camcorder
w/ 3.5" Color LCD & 300x Digital Zoom



Call Us Now!
1-800-226-2800

We Are Your Ultimate Source For Home Theater Entertainment!

DVD
VIDEO

DOLBY
DIGITAL

Big Screen TVs
Camcoders
Car Stereo
CD-R / Players
DTS Receivers
DVD Players
HDTV
Home Speakers
Mini Systems
MiniDisc
Portable CD
Radar Detectors
Subwoofers
Tape Decks
Telephones
VCRs

24-Hour Fax: (516) 564-9593
P.O.'s Welcome! • We Ship FedEx



Call For Major Brands & Models
361 Charles St. • West Hempstead, NY 11552

www.wholesaleconnection.com

AUTHORIZED ELECTRONICS



DON'T SEE IT?
CALL US...WE CAN GET IT!

ADS
ATL.TECH
BOSE
DENON
ENERGY
INFINITY
KLIPSZT
MARANTZ
MONSTER
NHT
NILES
ONKYO
PIONEER ELITE
PARASOUND
ROCKUSTICS
SANUS
SHERWOOD
SONANCE
SONY ES
TIC
VELODYNE
YAMAHA
AND MANY MORE

ALL ITEMS ARE
BRAND NEW!

NEW
WORLD
AUDIO
(800) 311-0392

SECURE ONLINE SHOPPING
www.newworldaudio.com

<http://www.audioclimax.com>

AUDIO CLIMAX

Professional Lighting & Sound
DJ Gear • Effects Lighting • Pro Audio • Nightclubs



1-800-773-4235
Call Us For Your Free Catalog!

SINGERS! REMOVE VOCALS
Unlimited Free Backgrounds
from Original Standard Recordings!
Thompson Vocal Eliminator™
VE-4 Free Brochure/Demo
24 Hour Demo/Info Line
(770)482-2485 - Ext 50
LT Sound Dept SR1 7980 LT Parkway Lithonia, GA 30058
Internet: www.LTSound.com
Better Than Karaoke For Over 25 Years!

AUTHORIZED

"One of America's Finest
Audio/Video Stores"

AUTHORIZED DEALER

We stock 106 brands of Audio,
Video and Car Stereo, only a few stores
in America can make this statement.

15 Showrooms

106 Quality Manufacturers

Member of the Better Business Bureau

Straight talk...for over 40 years

KIEF'S AUDIO/VIDEO

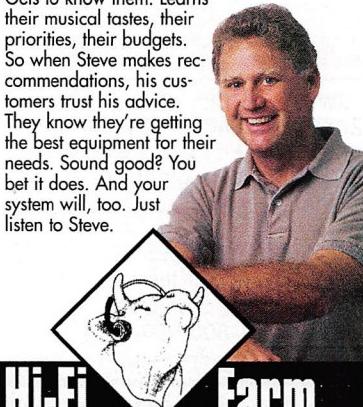
2429 Iowa St., Lawrence, KS 66046
Monday through Saturday 10am-6pm

sales@kiefsav.com

AUDIO/VIDEO
785-842-1811

The people with the best sound systems in the world listen to Steve Davis.

Why? Because he listens to them.
Gets to know them. Learns their musical tastes, their priorities, their budgets. So when Steve makes recommendations, his customers trust his advice. They know they're getting the best equipment for their needs. Sound good? You bet it does. And your system will, too. Just listen to Steve.



New & Used Audio Since 1978

800-752-4018 or 540-721-4434 ext. 106 • www.hififarm.com

CABLE TV

**COPY RENTAL TAPES
WITH OUR VIDEO STABILIZERS**

**VISION
ELECTRONICS**

FREE CATALOG!

BEFORE 
AFTER 

- No Rolls/Jitters/Flickers/Fading
- Works on all TVs, VCRs, Beta, & Cable
- 1 Year Warranty
- Money Back Guarantee

1-800-562-2252
2609 S. 156th Circle • Omaha, NE 68130
www.modernelectronics.com

Let us point you in the right direction ...

CABLE TV **Unbeatable PRICES!**

**DESCRAMBLERS
CONVERTERS • FILTERS
VIDEO STABILIZERS**

FREE
30 Day Trial
FREE
Product Catalog
FREE
1 Year Warranty

Arrow Technologies
2106 S. 156th Circle • Omaha, NE
TOLL FREE
800-554-ARROW
800-554-2776
Visit us on the web at: www.arrowtek.com

**MODERN
ELECTRONICS**

FREE CATALOG!

CABLE TV DESCRAMBLERS

- BEST DEALER PRICING!
- DISCOUNTED PRICING!
- 30 DAY FREE TRIAL!
- 100% MONEY BACK GUARANTEE

**COPY RENTAL TAPES WITH
OUR VIDEO STABILIZER**

1-800-906-6664
2609 S. 156th Circle • Omaha, NE 68130
www.modernelectronics.com

DRM ELECTRONICS. UNIVERSAL CABLE BOXES. FINEST QUALITY! GREAT PRICES! FULLY GUARANTEED. CALL TOLL FREE NOW 877-553-1525. 9AM-10PM EST.

CABLE TV DESCRAMBLERS, RFTS, ALL MAJOR BRANDS. SPECIAL DISCOUNT PRICING FOR QUANTITY BUYERS. FREE CATALOG! SORRY "NO SATELLITE TV" EQUIPMENT! CALL 1-800-327-3407.

HUDSON ELECTRONICS: UNIVERSAL DESCRAMBLERS, DECODERS, RFT PLATINUMS, GOLDS. 2-YEAR WARRANTY. DEALERS ALSO WELCOME! CALL 7 DAYS TOLL FREE: 1-877-449-3737.

LOWEST PRICES ON UNIVERSAL CABLE BOXES. REPLACES GENERAL INSTRUMENT, SCIENTIFIC ATLANTA, PANASONIC & MORE. ONE YEAR WARRANTY. GUARANTEED. 1-800-675-9345. www.allstatecable.com

AFFORDABLE CABLE TV BOXES! Your favorite brands at the lowest price. 30-day moneyback guarantee. www.cable-boxes.com 1-800-550-1511

LOUDSPEAKERS

Rotten Speaker Foam? New-Edge-It® Kits and Worldwide Service for all Loudspeakers. Over 100,000 Satisfied Customers! 800-511-EDGE or www.simplyspeakers.com

LOUDSPEAKERS



DRIVERS:

- ATC
- AUDAX
- ETON
- HIVI RESEARCH
- LPG
- MOREL
- PEERLESS
- SCAN-SPEAK
- SEAS
- VIFA
- VOLT**

CUSTOM COMPUTER AIDED CROSSOVER AND CABINET DESIGN

HARDWARE

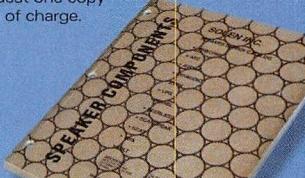
COMPONENTS

HOW TO BOOKS

Visit us online to view our catalog, tips and great projects.
www.solen.ca

Call, write, email or fax for the Solen Catalog.

An \$8.00 purchase price will be charged to non-professionals and discounted off the first order over \$50.00. Businesses and professionals may request one copy free of charge.




SOLEN

4470 Avenue Thibault
St-Hubert, QC, J3Y 7T9
Canada

Tel: **450.656.2759**
Fax: 450.443.4949
Email: solen@solen.ca
Web: www.solen.ca

Editor's Choice Award 2000

Sound and Vision, December 2000

Consumer Choice Award 2000

www.audioreview.com

'98 Editor's Choice Subwoofer

SGHT, February 1999

"Best of all, it's a true music sub."
"Boy, I could have sold tons of these. It's a sure fire recommendation for anyone.. [who] wants to add quality and quantity bass."

Srajan Ebaen, www.goodsound.com, July 2001
"(the VTF-2) could be reasonably compared to the performance of the \$3,000 B&W ASW 4000!"... "At \$499, it sets a new price/performance standard...I don't think you'll find a better bargain anywhere."

Richard Hardesty, Subwoofers Buyer Guide 2000
"The VTF-2 blasted out 20 Hz at 93 dB and delivered 107.1 dB SPL over the 25- to 62-Hz range - impressive for any sub, especially one with a 10 inch driver." ... "There are subs costing twice as much that can't match this performance."

Tom Nousaine, Sound & Vision, May 2000
"If you want a subwoofer with maximum boom for the buck, it's hard to beat the offerings from Hsu Research."

Robert Deutsch, SGHT, December 1999
"Allied to this transparency, was a leap in dynamic range from the Quads... widest and deepest soundstage..."

Paul Seydor, TAS, #118
"If you're looking for more bounce from your audio bucks, the Hsu VTF-2 has no equal." .. "..easily the best \$500 "tweak" I've ever heard."

Steve Guttenberg, Audio, November 1999
"101dB at 12.5 Hz, 110dB at 16 Hz, 114dB at 20Hz..."

Don Keele, Audio, August 1998
"Bargain of the Century"

Tom Nousaine, CSR, May 1998

Hsu Research True Subwoofers

Offer:

- Unparalleled Value
- Unparalleled User Support
- Unparalleled Flexibility
- Garnered more rave reviews than any other sub!

For more information, contact us at:

Website: www.hsuresearch.com

Email: hsures@earthlink.net

Hsu Research, Inc.

3160 E. La Palma Ave, #D
Anaheim, CA 92806

(800)554-0150/(714)666-9260
(714)666-9261 (FAX)

Available through select dealers or factory direct with
30-Day money-back guarantee

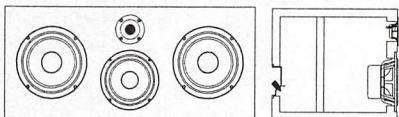
AUDAX HOME THEATER

Midisound is pleased to offer the Audax Home Theater Speaker Kits designed by the speaker guru Joseph D'Appolito. The complete system consists of a Center Channel Speaker, a pair of Front Speakers, a pair of Rear Speakers and a 200 Watt Powered Subwoofer.

Midisound offers the kits individually, with or without cabinets. The cabinets are oak veneered and have solid oak corners, full grills and are available in either a clear finish or black painted finish. The cabinets are $\frac{3}{4}$ " with 1" thick front baffles.

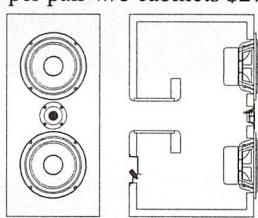
Audax Center Channel

Price each with cabinet \$340.00
Price each w/o cabinet \$190.00



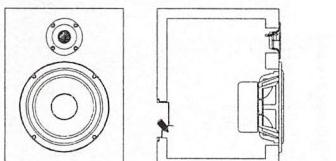
Audax Fronts

Price per pair with cabinets \$575.00
Price per pair w/o cabinets \$275.00



Audax Rears

Price per pair with cabinets \$359.00
Price per pair w/o cabinets \$179.00



Audax Subwoofer

Price w/o cabinet
\$235.00

Midisound cabinet cut
for woofer and
amplifier, port not
installed \$195.00 each.

Sub cabinet:
18" W x 28" T x 15 $\frac{3}{4}$ D

We sell several of these systems every week and the response has been wonderful. Don't pay more for less!

Please visit the Audax web page for a very comprehensive description of the kit and the whole design process at:

www.audax.com

MADISOUND SPEAKER COMPONENTS, INC.
8608 NE 108th Street
P.O. Box 44283
MADISON, WI 53744-4283 U.S.A.
TEL: 608-831-3433 FAX: 608-831-3771
e-mail: info@madisound.com
Web Page: <http://www.midisound.com>

LOUDSPEAKERS

PARTS EXPRESS
ELECTRONICS & MORE
www.partsexpress.com

SPEAKER CATALOG

1-800-338-0531

Call now for your FREE catalog!

Source Code: SVM

- ◆ Raw Speakers
- ◆ Video
- ◆ Audio
- ◆ Home Theatre
- ◆ CATV/DSS Accessories
- ◆ Audio Accessories
- ◆ Security
- ◆ Wire/Cable

WANTED TO BUY

CASH for USED AUDIO & HOME THEATER EQUIP. BUYING and SELLING by PHONE. CALL for HIGHEST QUOTE. (215) 886-1650 Since 1984. The Stereo Trading Outlet, 320 Old York Road, Jenkintown, PA 19046. WEB SITE Catalog: www.tsto.com

CD STORAGE

CONNECTION

For advertising information
call 1-800-445-6066,
or fax 1-212-767-5624.

The Ultimate STORAGE CABINET
the CUBE by Lorentz Design
Featuring our patented ALLSTOP STORAGE SYSTEM, no wasted space. Full-extension drawer slides. Made from high quality oak veneers and hardwoods. 23" H x 19 $\frac{1}{2}$ " W x 17 $\frac{1}{2}$ " D. Ships fully assembled. Stackable.

Stores 306 CDs or any combination of CDs, DVDs, CD-ROM, VHS, Cassettes, etc.

Call **800-933-0403** or visit www.lorentzdesign.com to order or for a free, color brochure detailing all our disc, tape & component storage CUBES.
LDI, Inc. • P.O. Box 277 • Lanesboro, MN 55949 • Fax: 507-467-2468

BILLY BAGSTM PRO-STANDSTM AUDIO/VIDEO • COMPUTER FURNITURE DESIGN

ANY SIZE ANY PLACE



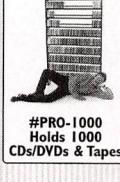
#TRI-PRO-6 Audio Rack with Stands



#PRO-5440 Component Center



#PRO-1.5 Audio Rack



#PRO-1000 Holds 1000 CDs/DVDs & Tapes



#TRI-PRO-5 Audio Rack



#PRO-6650 LP Audio Rack #8248 LP Storage Rack*



The Big Kahuna Entertainment Center

805/644-2185

4147-A Transport St. • Ventura, California 93003

For your local dealer visit us online at
www.billybags.com



Created for those who demand nothing less than the finest ... LOVAN's Millenium Stand Available in champagne silver or black

LOVAN INC

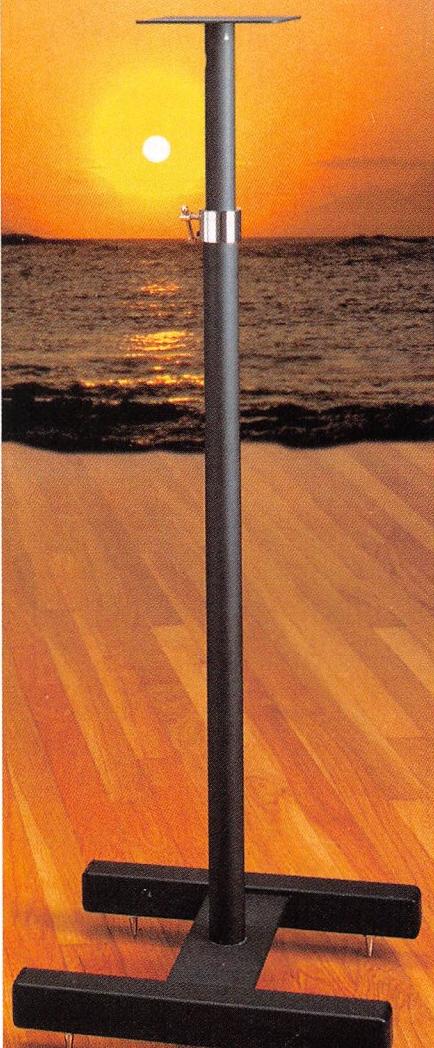


1610 E. Miraloma Avenue
Placentia, CA 92870
(714) 630-8208 Fax (714) 630-8991
Info@LovanInc.com
www.LovanInc.com

The **Caliber adjustable** speaker stand by Lovan was designed to combine visual appeal and superior performance. The height is adjustable from a range of 30 to 48 inches for optimum surround sound listening pleasure.

The base comes equipped with adjustable isolation points to eliminate vibrations and improve leveling. The steel tube features a vertical slot to conceal and organize power cords.

Finest Materials
Detailed Craftsmanship
Affordable Pricing
Ultimate Value



LOVAN INC

1610 E. Miraloma Avenue
 Placentia, CA 92870
 714•630•8208 phone
 714•630•8991 fax

www.lovaninc.com



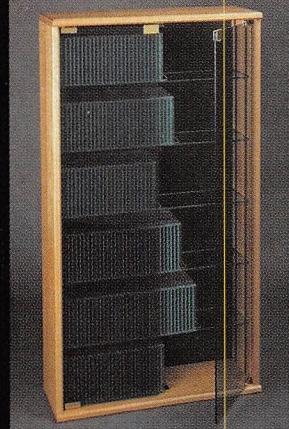
Infinite Capacity

**Imagine 270 CDs or 120 DVDs
 or 60 videos, in one drawer.**
Imagine a place for everything.
**Modular media cabinets you
 can't outgrow. Go ahead.**
Let your imagination run wild.
Design your own media center.

**Call for a free catalog or
 visit our website for details.**

CAN-AM
Since 1979
800-387-9790
cabinet.com

Solid Hardwood Media & Component Cabinets



Provides Unlimited Storage
 For CDs, DVDs, Video
 Tapes, LPs, LaserDiscs,
 Cassettes & A/V Components.

Doesn't Your Collection Deserve The Best?

Find out just how affordable top quality is.

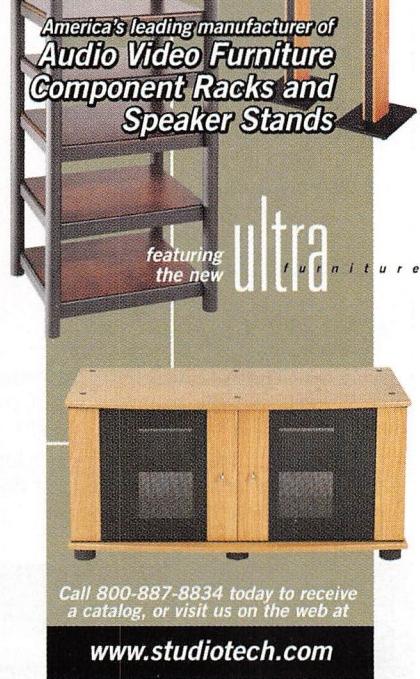
Request Info Kit 2 & Get All The Facts...

Call: 800-895-5241 Fax: 215-258-1241

 **SORICE**

PO BOX 301-42, Perkasie, PA 18944
info@sorice.com (e-mail)
<http://www.sorice.com> (website)

StudioTech™



*Call 800-887-8834 today to receive
 a catalog, or visit us on the web at*

www.studiotech.com

contacts

HOW TO REACH ADVERTISERS IN THIS ISSUE

PAGE	ADVERTISER	WEB SITE/E-MAIL	PHONE
147	ABT Electronics	www.abtelectronics.com	888-228-5800
127	Alpine	www.alpine1.com	800-ALPINE-1
147	American Theater Systems	www.amsound.com	800-889-5845
62, 66, 86	Athena Technologies	www.athenaspeakers.com	416-321-1800
6	Atlantic Technology	www.atlantictechnology.com	781-762-6300
C3	B&K Components	www.bkcomp.com	800-543-5252
53	B&W Loudspeakers	www.bwspeakers.com	800-370-3740
83	Bell'O	www.bellointl.com	732-972-1333
111	Boltz USA	www.boltz-usa.com	877-804-7650
14, 43, 65	Bose	www.bose.com	800-WWW-BOSE
27	Boston Acoustics	www.bostonacoustics.com	978-538-5000
23	Budweiser	www.budweiser.com	
46-47	Cambridge SoundWorks	www.hifi.com	800-FOR-HIFI
56	Canton	www.cantonusa.com	800-811-9757
69	Carver	www.carveraudio.com	425-335-4748
87	CEA	www.cesweb.com	703-907-7600
58-59	Crown Royal	www.crownroyal.com	
67	Crutchfield	www.crutchfield.com	800-955-9009
20-21, 38-39, 71	Definitive Technology	www.definitivetech.com	410-363-7148
2-3	Denon	www.del.denon.com	973-396-0810
48	Energy Loudspeakers	www.energy-speakers.com	416-321-1800
46-47	Hifi.com	www.hifi.com	800-FOR-HIFI
16a-b	Hitachi	www.hitachi.com	800-HITACHI
131	Image Entertainment	www.image-entertainment.com	818-407-9100
72	Integra	www.integrahometheater.com	800-225-1946
140-143	J&R Music World	www.jandr.com	800-221-8180
84	JBL	www.jbl.com	800-336-4525
41, 76-77	JVC	www.jvc.com	800-526-5308
28-29	Kenwood	www.kenwoodusa.com	800-KENWOOD
8	Klipsch	www.klipsch.com	800-KLIPSCH
7	Kool		
60	Legacy Audio	www.legacy-audio.com	800-283-4644
18	Lexicon	www.lexicon.com	781-280-0300
C4	Lucasfilm THX	www.thx.com	415-492-3900
25	Memorex	www.memorex.com	562-906-2800
79	Mitsubishi	www.mitsubishi-tv.com	800-332-2119
44	NAD	www.nadelectronics.com	905-831-6555
112	Niles Audio	www.nilesaudio.com	800-289-4434
144-145, 148-149	One Call	www.onecall.com	800-540-0900
10-11	Onkyo	www.onkyousa.com	201-825-7950
18	Outlaw Audio	www.outlawaudio.com	800-392-1393
4-5	Panasonic	www.panasonic.com	800-211-PANA
C2, 1, 52, 57, 80-81	Paradigm	www.paradigm.com	905-632-0180
88-89	Parliament		
146	ProjectorPeople.com	www.projectorpeople.com	877-845-0040
35, 37	Pioneer	www.pioneer.com	800-PIONEER
93	PSB	www.psbspeakers.com	888-772-0000
32a-b	Samsung	www.samsungusa.com	800-SAMSUNG
12	Sharp	www.sharp-usa.com	800-BE-SHARP
26	Sennheiser	www.sennheiserusa.com	860-434-9190
55	Sony	www.sel.sony.com	800-222-SONY
95	Sunfire	www.sunfire.com	425-335-4748
24	Tannoy	www.tannoy.com	519-745-1158
40	Tributaries	www.tributariescable.com	800-521-1596
63	Wharfedale	www.iagamerica.com	781-440-0888
50-51	Yamaha	www.yamaha.com	800-492-6242
74-75	Zenith	www.zenith.com	847-391-7000

SOUND & VISION (ISSN 1522-810X) is published ten times a year (bimonthly in February/March and July/August) by Hachette Filipacchi Magazines, Inc. at 1633 Broadway, New York, NY 10019. Periodicals postage paid at New York, NY 10001, and at additional mailing offices. Canadian Business No.

126018209RT, Canadian Sales Agreement No. 99236. Authorized periodical postage by the Post Office Department, Ottawa, Canada, and for payment of postage in cash. **POSTMASTER:** Send address changes to Sound & Vision, P.O. Box 55627, Boulder, CO 80322-5627; phone, 850-682-7654; fax, 850-683-4094.

SOUND & VISION SUBSCRIBER SERVICE

PLACE
LABEL
HERE

MOVING? Please give us 8 weeks advance notice. Attach label with your old address, and write in new address below.

RENEWING? Check box below and attach label with corrections marked, if any.

SUBSCRIBING? Check box and fill in coupon. For gift subscriptions attach a separate sheet.

*Send
SOUND & VISION
for 1 year at \$24.00*

New Subscription Renewal
 Payment enclosed Bill me

Canadian and foreign orders
add \$10 per year.*

NAME _____

ADDRESS _____

CITY _____

STATE _____

ZIP _____

E-MAIL ADDRESS _____

Would you like to receive special offers from qualified users
of our e-mail and mailing lists? Yes No

**1(850) 682-7654
FAX 1(850) 683-4094**

SOUND & VISION

P.O. Box 55627, Boulder CO 80322

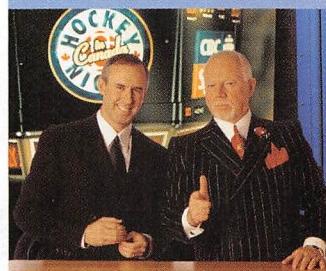
*Payment in U.S. funds must accompany order.

S&V PICKS

THINGS TO DO WHEN YOU'RE NOT READING **SOUND & VISION**

WEB HITS

SPORTY SLICE Watched by Canadians with religious regularity, the Coach's Corner segment with Don "Grapes" Cherry and straight-man Ron MacLean on *Hockey Night in Canada* now spouts Grapes' wrath on demand from the CBC's Web site (cbc.ca/sports/hockey/hnic/coach.html). Meanwhile, *Monday Night Football* commentator Dennis Miller continues to amuse and



confuse with his tales-from-the-cryptic style, but you can study some of his obscurer references at espn.go.com/abcsports/mnf/sights_sounds/dmiller.

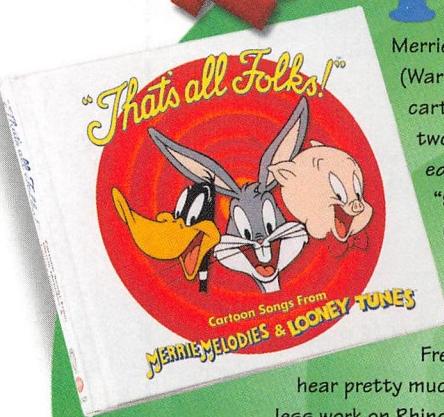
— Peter Pachal

S&V UPDATE

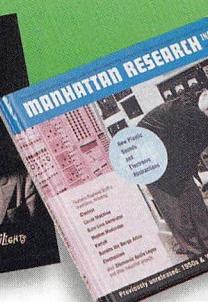
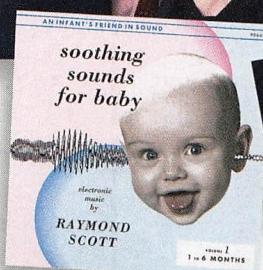
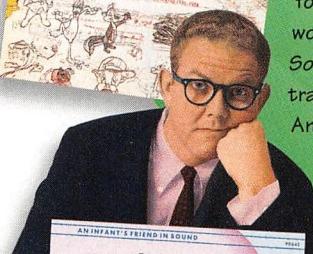
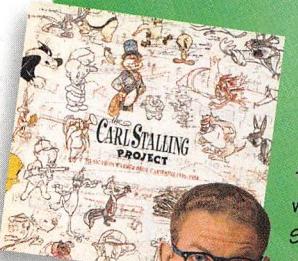
THAT'S A WRAP! On the heels of last month's item on the *Twin Peaks*-oriented *Wrapped in Plastic* magazine comes the announcement that Artisan will release the first three episodes of the weird-as-real-life series on DVD this December. (Surprise extra: commentary by the normally reticent director, David Lynch.)

BUSH WHACKED It ultimately didn't take intervention from the court-appointed executive branch to do in Comedy Central's *That's My Bush!* (July/August). The network's decision to move it from after *South Park* to the cable hinterlands was enough. Of course, the show's sometimes gratuitous excess didn't help.

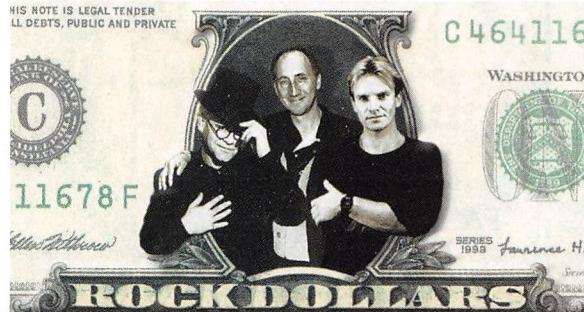
It's TOON-UP TIME!



That's All Folks! (Rhino, \$32) promises to do for the vocal talents behind the Looney Tunes and Merrie Melodies what The Carl Stalling Project (Warner Bros., \$18) did for the genius behind the cartoons' dervish scores. The lovingly produced two-CD set holds nearly two hours of brilliantly edited greatest hits, including a manic scatting take on "Sweet Georgia Brown" and the complete What's Opera, Doc? (Most serious omission: Beaky Buzzard's drolly earnest "My Momma Done Told Me.") Showcased are the breathtaking vocal acrobatics and comic timing of, among others, Mel (Bugs Bunny) Blanc, Bea Benaderet (a.k.a. Betty Rubble), and Stan Freberg (that forlorn-looking crewcut gentleman below). ● You can hear pretty much all of Freberg's alternately clever and cloying, clued-in and clueless work on Rhino's four-CDs-and-a-video *Tip of the Freberg* (\$60). Many of Stan's famous parody records still hold up, including the impeccably crafted and potently surreal Lawrence Welk-at-sea "Wuner'ful, Wuner'full" and Alice-finally-goes-to-the-Moon "The Honey-Earthers." ● All true toon fans should get to know Raymond Scott, who concocted the jazz novelties like "The Toy Trumpet" and the ubiquitous "Powerhouse" that Stalling so deftly exploited. (All can be found on *Reckless Nights* and *Turkish Twilights*, Columbia/Legacy, \$12.) Also worth a listen are Scott's on-the-level but somewhat discombobulating *Soothing Sounds for Baby* (Basta, \$13) and the revelatory two-CD set of trail-blazing electronica, *Manhattan Research, Inc.* (Basta, \$27). ● And, finally, to hear just how far someone can go on a tankful of Stalling, check out avant-garde hipster John Zorn's slice-and-dice Hammer homage, *Spillane* (Nonesuch, \$18).



"What do rock stars dream of?" asks Sting's obnoxious Jaguar commercial — well, apparently nothing but money, money, and more money. Maybe a little less time spent on promotions and sponsorship, and just plain selling out, and a little more spent on songwriting and performing would yield some great music — then again, given where these rock & roll dinosaurs are in the arcs of their careers, maybe not.



"COOL TOYS"

AVR307 7.1 Channel Audio/Video Receiver

B&K

SIMPLY BETTER.



Simple as 1,2,3

B & K's AVR307 DIGITAL RECEIVER. B & K's AVR307 Digital Receiver has all the input and output jacks you will need today and a few extra planned for tomorrow; with B & K's "PLUG 'n PLAY" system your only decision is which CD or DVD you want to enjoy. By simply selecting the source you wish to enjoy, "PLUG 'n PLAY" takes over for you!

Sit back, relax and let the AVR307 play your music and movies. The "PLUG 'n PLAY" System will seek out your audio and video signals and then decode and deliver them quickly and intelligently to your speakers. B & K's AVR307 is even smart enough to lower your video screen when needed, turn on extra amplifiers for other rooms and recall your favorite personal setting automatically. ■

B & K, Simply Better!

*When planning
your dream home
make sure to
stick to the basics.*

Designed and Manufactured in the U.S.A.

In NY: 716.656.0026 • 1.800.543.5252



DigitalDNA™
from Motorola

B&K Components, Ltd. • 2100 Old Union Road • Buffalo, New York 14227 • Fax: 716.656.1291 • E-mail: info@bkcomp.com • On the web: www.bkcomp.com • The B&K AVR307/305 has a 5 year warranty for parts and labor. • Remote Control is covered by a one year warranty. All Specifications subject to change without notice. • Dolby Digital™, AC3™ and Pro Logic™ are trademarks of Dolby Laboratories Licensing Corporation. • DTS® is a registered trademark of Digital Theater Systems®, LLC. • Motorola, DigitalDNA, the DigitalDNA logo and The Heart of Smart are trademarks of Motorola, Inc. • (c) 2000 Motorola, Inc. • Lucasfilm Ltd. & TM. All Rights Reserved. Surround EX is a jointly developed technology of THX® and Dolby Laboratories Inc., and is a trademark of Dolby. Used under authorization. • THX® is a registered trademark of Lucasfilm Ltd. (c) 2000 Lucasfilm Ltd. All rights reserved. • p/n ad-5010-rev.O-Aug-3-2001-AVR307-Eskimo-backpanel/foreground-Sound&Vision

After a decade of watching the greatest chillers, thrillers and killers...

We thought you might need a little musical break.



2

Introducing THX ULTRA 2. Now, the best way to enjoy MOVIES, MUSIC AND MORE!